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BY

J. C. STAMP, C.B.E., D.Sc

ISSUED IN ADVANCE OF THE JOURNAL OF THE ROYAL STATISTICAL SOCIETY,
Vol. LXXXII, Part IV (July, 1919).

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THE WEALTH AND INCOME OF THE CHIEF POWERS.

By J. C. STAMP, C.B.E., D.Sc.

[Read before the Royal Statistical Society, May 20, 1919.
The Ex-President, Sir BERNARD MALLET, K.C.B., in the chair.]

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No apology is needed for dealing with this subject at the present time when the air is filled with discussions about national wealth,

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capital levies, indemnities and kindred questions. We are all familiar with the class of persons who profess to despise and distrust statistics and statistical methods. They are usually the first to rush to statistics when they are in trouble, and to use them without investigation or discrimination. While there is a very considerable literature upon this particular subject—running into many scores of works—it is extraordinary how the less responsible efforts, often mere partisan guesses, gain a footing and keep currency with serious and reasoned estimates. This arises partly from the fact that the partisan who is out to prove his point is nearly always best pleased by an extreme figure, and so we find that current estimates of the wealth of the United Kingdom (in 1914) used in polemical literature, range from 10,000 millions to 24,000 millions sterling.

At another moment the fickle user of figures seeks to prove that statistics of wealth have no real meaning, that they assume an impossible and sudden realisation of all commodities, that they omit certain items of well-being, and so on; and because estimates made up on one particular principle are not really serviceable for every possible use, they are condemned as being useful for none. The very wide variations that exist in estimates purporting to represent the same facts—for the popular use of statistics dislikes all qualifications, and drops out all footnotes or definitions—is perhaps one of the chief reasons for the ultimate distrust. And yet, of course, proposals for progress in modern civilisation and solutions of its problems depend to an increasing extent not merely upon correct aggregations and classifications of numbers, but also still more upon methods of estimation, or statistical science as distinct from State-arithmetic, in those fields where precise measurement or enumeration is not possible.

The uses to which estimates of national wealth and income may be put are many and various. They include :—

1. Tests of "progress" by way of comparisons between different years, to show the accumulation of capital; tests of the distribution of wealth, according to the form or embodiment which wealth takes; of the effects of changes in the rate of interest, or in the value of money.

2. Tests of the relative "prosperity" or resources of different nations or communities, either as a whole or per head of the population, and in relation to their national debts.

3. Comparisons of income with capital and property.

4. Considerations of the distribution of wealth according to individual fortunes, and changes in that distribution.

5. Consideration of the applicability and yield of schemes of taxation, *e.g.*, the capital levy.

6. Questions relating to War indemnities.

It is in connection rather with the second, fifth and sixth classes above that the public mind is most exercised at the present moment, and a great deal of careful, as well as much careless, work has quite recently been done in this field of statistics.

It is perhaps hardly necessary to say that the capital wealth or income *at any given moment* is not a sole test of ability to bear indemnities—it is only a partial measure, and the potential wealth in ungotten minerals and resources, as well as the character of commerce and *distribution* of income, are important factors in the problem. It may, however, be pointed out that present values are on a very different scale from those which are being discussed in this paper, and the true money measure of present wealth can only be guessed at for some time yet.

2. The Object of this Paper.

The objects of the present treatment of the subject are :—

1. To review the great mass of recent work from different countries, and to select the most authoritative and careful efforts, presenting the main results for the British reader within the limits of a single paper.

2. To present those results in a uniform notation in currency, adjusted as at a uniform date, 1914, and to relate them as nearly as possible to like subject-matter for each country. The year 1914, as at the outbreak of war, represents the latest date for which satisfactory statistics are generally available. No useful work can be done on any later year, so great is the disturbing effect of war. As soon as stable conditions are again reached, and proper measurements can be made, not only will 1914 serve as a point from which to measure the effects of war, but it will also serve to show the *comparative* changes for different nations.

3. To subject the data and methods involved to careful analysis and criticism, so far as that may be possible. At present, estimates of every kind, good, bad and indifferent, pass muster together as equals. I shall endeavour to label them according to their probable degree of approximation to the facts, or rather, according to the extent I feel able to say that they cannot be inaccurate. Here I shall use the term "possible range of error" out of the ordinary signification attaching to "probable error," and to bear the following meaning :—

The estimate under each detailed head is considered, and the extent to which it may possibly be deficient or excessive is judged by reference to the character of the data and the methods employed.

The "minus" range of error is not always equal to the "plus" range; as, for example, in the case of an aggregated valuation used for taxation, which is not nearly so likely to be excessive as it is to be deficient, in normal circumstances. All the "minuses" and all the "pluses" are then separately totalled. It will be obvious that as all the details are unlikely to err in the *same* direction, the final aggregate valuation is probably much closer to the absolute truth than this "possible range of error" would indicate, and the latter usually expresses a generous estimate for the *probable* error.[1] The determination of these percentages rests on no absolute or external criteria—they are purely subjective judgments of my own, and, therefore, the personal equation must be very prominent. There is, however, this one limit to that disadvantage—the *same* personal equation runs throughout all the estimates of error, and they are not the products of different observers. In order that some kind of relative value may be attached to the different estimates of national wealth, I have introduced for the purposes of my final table, in which they would otherwise appear as of equal reliability, a system of grading. Those cases in which the "possible range of "error" is not greater than 10 per cent. of the whole estimate, are classed as Grade I. Those where it *may* be more than 10 but not more than 20 per cent. are called Grade II, and those similarly between 20 per cent. and 30 per cent. Grade III, while the mere "guesses" not based on recent broad data are put in Grade IV. An estimate that at the time might have been put in one grade may, so far as the final summary for 1914 is concerned, be re-graded in a lower category if in bringing it up to the level of 1914 further possibility of error is introduced. As this is the first effort of the kind, I offer every apology for its empirical and elementary character, but I think it represents an attempted advance in this realm of comparative statistics.

4. The final object—which, however, in point of arrangement comes first—is to discuss briefly the various methods that are available for the determination of national income and national capital, and their chief characteristics or limitations, for I feel that many readers may have but little information before them on this subject. I shall also add a brief and selected bibliography of recent work. An extensive list, down to 1913, is contained in Corrado Gini's great work, "L'Ammontare e la Composizione della Ricchezza delle Nazioni," enumerating some three to four hundred references, mainly for capital only. A good statement of recent contributions is given by Lanfranco Maroi in "Come si calcola e a quanto ammonta la ricchezza "d'Italia e delle altre principali nazioni," while the official report of the Australian census has a list of about one hundred and thirty references.

I have included very few references to the earlier estimates in each country, however well known or valuable, for reasons of space. In the first place, the further removed they are from 1914 the more risky it is to "build" up on them to reach a figure for that date. In the second place, all competent investigators can be relied upon to make the most of the work of their predecessors, and to use it so far as it is valuable.

For reasons of space also, I shall not touch upon the measurement of progress in the different countries, or the comparative distribution of property and income, or to any extent on the proportions of capital which are represented by different classes of property. These topics may form in themselves suitable matter for further papers at a later date.

3. General Observations on Comparisons in Wealth.

"The nutrition of a Commonwealth consisteth in the Plenty
"and *Distribution of materials* conducing to life: In Concoction
or "Preparation . . .
"By Concoction, I understand the reducing of all commodities
"which are not presently consumed, but reserved for nourish-
"ment in time to come, to something of equal value . . .
"and this is nothing else but gold, and silver, and money.
"For gold and silver being (as it happens) almost in all countries
"of the world highly valued, is a commodious measure of the
"value of all things else between nations. . . . By the means
"of which measure, all commodities, moveable and immoveable,
"are made to accompany a man to all places of his resort,
"within and without the place of his ordinary residence; and
"the same passeth from man to man within the Common
"wealth, and goes round about, nourishing (as it passeth) every
"part thereof; in so much as this concoction is, as it were,
"the signification of the Commonwealth."—*Hobbes.*

In my experience, for the sake at any rate of those readers who are new to the subject, it is never wise to set abroad comparisons of this character without reference—even at the risk of repetition—to the chief limitations and dangers involved. I have dealt with some aspects of the subject in "British Incomes and Property."

(i) It is obvious that the aggregate wealth of a tribal community

[1] While I should not care to give a precise expression for the *probable* error in these circumstances, I do not think it would ordinarily exceed $\frac{2}{3}\sqrt{p}$, where p is the "possible range of error," + or −.

measured in cowrie shells (even if the valuation in shells were reduced to sterling at the "par of exchange" for such shells with a gold currency) would not be comparable with the wealth of a civilised community. There would be many things by which the native sets great store, and which, in short, are valuable to him, but have no merit in the eyes of a European, while many treasures to a European would be "worthless" to the native. The two countries might theoretically contain each the same physical objects of possession, and yet register quite different aggregates of "wealth." The illustration is, of course, an extreme one, but it is intended to bring out the fact that in the countries to be compared men must care for the same objects in a similar way, and their scale of relative values must be akin. To the extent to which countries diverge in this respect, the comparisons will be invalid.

(ii) Consideration of the aggregate of gross personal wealth without regard to a national debt, and the taxation consequent thereon (even if the whole debt is held at home) may lead to ridiculous results. The stock may be wealth in the hands of the investors, but it is a concealed liability, by way of taxation, on the incomes and capital generally.[1]

The usual way, and I think the best way, of treating this matter in the past, has been to count as wealth the individual holdings in Government stock, but to *deduct the debt as a mortgage* on the property owned by the State or collective community. The practice of valuing national wealth varies in different countries, some being much more inclusive in the matter of State property, and this difference would be a source of trouble in making comparisons if the gross value were in question. But the amount of the net capital, after deducting the debt, is so much smaller that its bears a relatively insignificant proportion to the whole national capital, and so this method of deducting the debt tends to diminish the difficulty and the importance of the exact comparability of the estimates for different countries so far as the year 1914 is concerned. In all comparisons and estimates for later years the matter will assume great importance, for the deduction of the debt from State property will often give a minus quantity, which for many purposes, though not for all, should reduce the aggregate of personal wealth.[2]

(iii) The wealth of a country may mean *either* the value of the objects found within its boundaries, *or* the wealth of the inhabitants, including their foreign possessions, and excluding wealth within the

[1] *British Incomes*, p. 390.

[2] *Vide* "An estimate of the capital wealth of the United Kingdom in private hands." *Economic Journal*, September 1918.

country held by people abroad. The confusion between these two ideas has played havoc with discussions on such subjects as the "Taxable Capacity of Ireland."[1] It is the latter sense—the wealth of the inhabitants—that is mainly under consideration in this paper. That aspect is foremost when questions of taxation are prominent, but there are matters, such as the inalienable wealth of a country in a geographical sense (for warlike purposes) for which the former is important. A colony capitalised from the home country may be poor by the wealth of its inhabitants, but rich in its resources and the actual yield within its borders.

(iv) Wealth in private hands is not easy to define exactly, for there are various shades of ownership:—

(*a*) Absolute personal disposition of the whole value.

(*b*) Trust interests.

(*c*) Collective ownership with only potential specific allocation to individuals, such as the reserves of companies which may be of higher value in the hands of the company than the aggregation of the market value of individual interests therein.

(*d*) Collective ownership, without the possibility of individual allocation, social private wealth, such as churches, clubs, etc.

Similarly, communal wealth is not all of the same degree of "dispersion" in value.

(*a*) City and local property like waterworks, buildings and trams, having a "value" determinable by deliberate comparison with privately owned objects.

(*b*) National property, varying from a museum to a navy.

The closeness with which a "market value" can be assigned varies with the class of wealth, for, if there is no possibility of a market, one naturally tends towards the adoption of the cost of production or reproduction. Moreover, some of the comparisons of national wealth are slightly impaired by the extent to which the methods employed give different recognition of each class.

(v) So far as "income" is concerned, there are other considerations, which I have set out in "British Incomes," and will not repeat here, except one—by way of illustration—viz., the non-inclusion of a valuation of domestic services by a wife to her husband and home which would lead to a difficulty in comparisons between countries of different social habits. For example, if we suppose that in one country one million wives remain at home and one million women work in industry, and there are no domestic servants, the total "income" will differ from that of a country where half the "wives" work in industry and half the other women are domestic

[1] *British Incomes*, p. 369.

servants in the homes of the absent wives, despite the fact that the total "work" being done is the same in both cases.

(vi) In countries where values vary widely at short intervals for "stock" or produce which bulks largely in the total valuation, there may be more difficulty in securing a valuation on normal conditions.

4. VARIOUS METHODS OF COMPUTING WEALTH AND INCOME.

Stated quite briefly, the available methods for computing National capital in different countries are as follows :—

(*I*) *Based on Data arising through the Taxation of Incomes.*

(*a*) *Collective Taxation or Taxation at the Source.*—The statistics of such taxation covering the whole profits of corporate bodies, like public companies, before distribution or whether distributed or not, obviously lead to comprehensive results. Where *sources* of income are attacked for revenue purposes, and the destination of income is ignored, it is not necessary for elaborate estimates to be made for income remaining in collective or semi-collective ownership ; moreover, such a system allows of profits being presented for different *classes* of business or income, and so enables them to be capitalised on an appropriate basis. There may, however, be a danger that this method will give too high a result, if sufficient allowance is not made for income going to foreigners or persons living entirely abroad which thus forms no part of the national income. If the tax is on the British model, which taxes in full *both* income originating abroad and accruing to persons residing in the United Kingdom, *and* income originating in the United Kingdom and accruing to persons abroad, this difficulty is inherent in the method, and perhaps sufficient recognition has never yet been given to it. Liability to error arises in three ways :—

(i) Evasion in the tax.

(ii) Omissions from the scheme of tax (*i.e.*, "garden produce" as taxable income ; "enjoyment" income from movable property).

(iii) The basis of capitalisation, viz., the number of years purchase adopted.

This method, generally known as the "Giffen" method, though not invented by him, is the main basis for the valuation for the United Kingdom. It will be to a limited extent available in the United States, South Africa and other colonies.

(*b*) *Taxation of Income on Individual Returns.*—Where statistics of this character are available, they may be utilised for capital

valuations, but only with some difficulty. If there is a rough division of income into earned income and income from property, it is of course of assistance in the capitalisation. The chief defects are :—

(i) The considerable extent to which evasion takes place.

(ii) Omission of all income held collectively.

(iii) Difficulty in determining the ratio of income to capital on the average, which makes capitalisation a far greater difficulty than under (*a*) (iii) above.

(*II*) *Based on Data arising through Annual Taxation of Capital.*

(*a*) *Particular Classes of Property, such as Land or Buildings.*—Obviously these particulars supply a part only of the whole capital valuation, and they more properly belong to the "inventory" method" referred to below. Unless the values are revised regularly on uniform lines, without local differences, they form but a rude basis, and there are always difficulties in determining the extent to which other forms of wealth (*i.e.*, shares or business profits) duplicate these values. Some of the Continental systems of taxation supply material of this order, and the Australian States have regularly revised valuations which are valuable because they constitute so large a fraction of the total wealth.

(*b*) *General Property Valuation.*—The particulars furnished by a system of annual taxation upon all classes of property, should, in theory, form an ideal basis for a valuation. But unfortunately, in practice, such a tax as the General Property Tax in the United States, is full of defects. The valuations of personal property tend to disappear altogether (as was the case during the eighteenth century with our own "Land Tax") or to be negligible, and thus real property alone remains to bear the burden. This real property is assessed on very diverse lines in different areas, and is admittedly much below the selling values in many States. These facts are commonplaces to all students of American taxation. In effect, therefore, this class is not really distinguishable from II (*a*) above and the information gained is never enough for a complete valuation, but becomes only a factor in the inventory methods.

III.—Based on Data arising through Taxation of Capital at Irregular Periods.

(*a*) *Statistics of "Estates" chargeable with duties on passing at Death.*—This method has the appearance of being the most satisfactory and scientific of all. A special *ad hoc* valuation is made periodically of all wealth held in individual ownership, and it is only required to ascertain what proportion of the whole comes thus

under review in any given year, or, alternatively, at what intervals of time the same item of wealth will be re-charged to duty on the average, in order to compute the total wealth belonging to individuals. But this apparently simple task is, in practice, fraught with many difficulties, and the method of ascertainment of the "multiplier," though greatly improved of late years, is still open to doubt or enquiry upon important points. The question cannot possibly be opened up at length here, and those interested are referred to the considerable literature upon the subject, notably Sir Bernard Mallet's Paper given to this Society in 1915; Mr. G. H. Knibbs' work, *The Private Wealth of Australia;* Chapter XI of my *British Incomes;* and the monumental work by Corrado Gini to which reference has been made. Knibbs says there are two methods—(1) the determination of the average interval of time between the passing of estates to the successors in title, and (2) the ascertainment of the average rate of the passing of estates during any period under review. The first may appropriately be called the *devolution-interval* method, and the second the *devolution-rate* method. Obviously the two methods are—in the last analysis—essentially the same, the number of years in the devolution interval being the reciprocal of the annual rate of devolution. At first sight it might therefore appear that it is a matter of little moment which method we follow. This surmise is not correct; "the devolution interval method is the more complicated and uncertain, and the corrections—which must be applied to any estimate of its value—are not readily computed or easily "ascertained." Gini, however, makes some subtle distinctions, and elaborates several variations with different titles.

The chief difficulties of all devices for using Probate Returns arise through:—

1. Defects in administration and evasion of the particular duty, the statistics of which are being used.

2. The effect of gifts *inter vivos*, in keeping a certain proportion of wealth from "passing" with the frequency of ordinary intervals for estates as a whole.

3. Legal points in the Estate Duties, *e.g.*, the practice of settlements, and settlement Estate Duty.

4. The fact that vital statistics are continually changing.

5. The application and sufficiency of vital statistics, *e.g.*, the variations between the death rates for the different ages, classes of people, and the two sexes, in relation to the wealth held in each class.

6. The actual growth of wealth in the period under review.

Even when these difficulties are overcome, the result is an

aggregate of *individual* wealth only, and additions have to be made for wealth which may not be fully reflected in individual holdings (reserves of public companies) and for social, corporate or national wealth. The method would have the advantage over the method of capitalisation of income, in that it measures the value of non income producing wealth, such as furniture, pictures and jewellery but this advantage is considerably reduced in practice, for such wealth is frequently "passed" during lifetime, and is often not fully valued.

The method has long been the favourite one in France, and it has also been studied and used in the United Kingdom, Italy, Australia, and to a less extent elsewhere. It has almost invariably given lower results than the other methods.

(*b*) *Statistics of Capital Valuations for Specific Purposes.*—The special valuation of land for the Land Values Duties furnishes an example. From this point of view these statistics are partial and auxiliary only, and nothing short of a complete and universal valuation—as under proposals for a capital levy—could furnish statistics adequate for an estimate of national wealth. Even in this case there is a large sum that must be called "national wealth" that would not be included in the aggregated individual fortunes.

IV.—The Inventory Method.

This method aims at a valuation, in the aggregate, of each "form" in which wealth is embodied, without regard to the ownership by individuals, companies, &c. It is often called the "objective" method. It depends for its success almost entirely upon the existence of statistical material compiled for other purposes, *e.g.*, import and export statistics, local government taxation figures, expert valuations of mineral resources, statistical enumerations of objects to which an average value can be applied. Examples of the last mentioned are the valuation of shipping by reference to the total tonnage multiplied by an average value per ton, or of mining capital by the average capital invested per ton of output; or of live stock by the number of each kind multiplied by an average price; or even of businesses, by a co-efficient. There are few classes of statistics that have not been pressed or even "hammered" into service for the "inventory" method, and further illustration can best be left to the paragraphs that follow.

The chief defects of the method are:—

1. The impossibility of testing how far the ownership of the wealth is within the country or not. It is obvious, for example,

that if half the farms in a country are mortgaged to or owned by foreigners, their value will give a false impression of national wealth.

2. The diffieulty of determining whether all forms have been included.

3. The risk of overlapping, *i.e.*, stocks and shares duplieated with real property, owned by companies.

4. The divorce from all tests of profit earning capaeity. For example, the carriages, railway lines, stations, &c., of a railway company are all "valued," and their aggregate comes to, say, 5,000,000*l*. The railway as a whole may have been losing money for years, or, on the other hand, may be making several millions a year.

Of course, as a general rule on capitalisation of plus and minus "goodwill" (in the excess or deficieney of profits compared with the normal return upon invested capital), the differenees tend to cancel out, and an aggregate of valuations as "going conecrns" tends to approximate to invested eapital, except when there are striking changes in the value of money and rate of interest.

5. The diffieulty, where "averages" are employed as factors, of accurately determining them. If they are the results of impressions, they may be considerably in error, and even if they are the produet of actual observation they have often to be carefully weighted in applieation to the different elasses.

It is rarely that a "sample" can be taken which can be regarded as identical in proportionate components with the whole. Average "wage" statisties ean be applied only after close study of the data.

The Inventory method may be carried through by single observers, as in France, Germany, Spain, Australia, Argentine, and other countries, or it may be the collected results of many investigators, as with the United States, where it is called a "Census."

An auxiliary or alternative method to the Inventory, but really falling under that title, is the "Fire Insurance" method (as applied in Germany) which of course is very rough, and covers only a part of the field.

V.—The "Census" Method.

In the Census proper a statement is taken from each individual resident declaring the whole of his wealth and income. This method has been followed in Australia, and is described with some elaboration and mueh important new analysis by Mr. G. H. Knibbs. It has the disadvantage of course that individuals may have very different ideas of capitalising their income, or of estimating market values; that

some may be afraid of the use of the Census for taxation purposes; and that there may be omissions to make the return. In any case, additions have to be made for collective wealth. But it is the only method which enables direct correlation between wealth and income to be examined. From such an examination Mr. Knibbs has obtained the "wealth-and-income" or "pluto-prosodic" surface.

The chief methods of determining National Income follow to some extent similar lines.

1. *Statistics of Income Taxation.*—The value of this method depends on the completeness and efficieney of the tax in question. It is, for example, very different if England is compared with Italy. "Taxation at the Source" obviously gives more complete figures, requiring less supplementing from other sources.

The extent to which this method covers the field depends upon the exemption limit, or the point at which the tax starts. The Prussian limit of 47*l*. per annum enabled the method to be applied to cover the bulk of the population, but the British limit of 160*l*. did not account for as much as one-half of the total income, or more than one-eighth of the people. The American exemption, still higher, left an even greater proportion to be dealt with by other means. But with all its defeets, this method is the only really satisfactory one for dealing with the income of the wealthier section of the community.

2. *The Occupational Census Method.*—This method is used for dealing with the wage earning classes and smaller incomes where the ineome tax statistics do not apply. These classes have little income beyond their earnings, and the average earnings of each elass are determined as closely as may be, and applied to the number of earners in each class or occupation as given by the Census. The whole value of this method depends, of course, on the accuracy of the census, and still more upon the care with which wage statisties are prepared and handled. The lower half of the British estimate is determined in this way with very satisfactory material. The same method is adopted for France, but, by the applieation of averaged earnings, the result is obtained on rougher lines. In France, moreover, the method is applied to businesses and professions in the absence of income tax statistics.

3. *Interest on Capital.*—In a few cases estimates are partly made up, or are checked, by a computation of the average yield upon different classes of capital to the amount of such capital determined in other ways.

4. "*Net Output*" *or Census of Production Method.*—If the total value of work done or goods produced in a year is determined and

the values of the raw materials used are deducted, the "added "value" may be taken to be the fund which forms the people's income. In the British Census of Production, 1907, the "Net "Output" was the gross output (selling value) less the cost of materials used. "It expresses completely and without duplication "the total amount by which the value (at works) of the products "of the industry taken as a whole, exceeded the cost (at works) "of the materials purchased from outside, *i.e.*, it represents the "value added to the materials in the course of manufacture." It corresponds, *approximately*, to the balance of a trading account. It constitutes for any industry the fund from which wages, salaries, rent, royalties and sundry expenses have to be defrayed, the balance being profit (or loss). Mr. Flux showed that the results of the 1907 Census were consistent with the estimates of British income obtained in other ways. Giffen, in 1903, made an estimate by aggregating the value of goods consumed. This method has hitherto been the chief one for the determination of the incomes of the United States.

5. *The Income "Census."*—This method has been adopted in Australia for 1914-15 at the same time as the Wealth Census referred to above.

5. THE UNITED KINGDOM.

I do not propose to devote a great deal of my space to the estimates of our own national wealth and income because the literature on the subject is readily available, and the methods and data are better known and understood than those for other countries.

The most recent detailed estimates of capital are those given by Mr. Crammond before this Society in 1914, 16,472,000,000*l.*, and my own in *British Incomes and Property* (published in 1916), for 1914, of 14,319,000,000*l.* ± 1,867,000,000*l.* The latter was re-examined in 1918 in the *Economic Journal*, in connection with the proposals for a capital levy which had brought forth a crop of "estimates" widely divergent. The former was repeated by Mr. Crammond recently without re-examination.

The estimates by Sir Bernard Mallet and Mr. Strutt, given to this Society in 1915, based on the "multiplier," led to a considerably lower figure than my estimate. For convenience I reproduce below, from *British Incomes*, the main headings of the valuation (which has not to my knowledge been adversely criticised in any detail) and would refer those interested to Chapter XI of that book for further particulars :—

	Capital value (million £).
1. Lands	1,155
2. Houses, &c.	3,330
3. Other profits (Sch. A.)	22
4. Farmers' capital	340
5. Sch. C., National Debt, &c.	1,148
6. Railways in the United Kingdom	1,143
7. Railways out of the United Kingdom	655
8. Coal and other mines	179
9. Ironworks	37
10. Gasworks	182
11. Waterworks, canals, and other concerns (Sch. A.)	278
12. Indian, colonial, and foreign securities	621
13. Coupons	383
14. Other profits and interest	276
15. Businesses not otherwise detailed	2,770
16. Income accruing abroad and not remitted	400
17. Income of non-income tax paying classes derived from capital	200
18. Movable property, &c., not yielding income (furniture, &c.)	800
19. Government and local property	400
Total valuation	14,319
or, in round figures	14,300

At the time when Mr. Crammond gave his estimate of 16,472 millions, I criticised some of his details, and I find that he remarked that my criticism was "very valuable" and that he was "glad to "accept" the corrections. In setting out my own results subsequently, I continued the analysis of his details. But in view of his recent use of the original figure as the estimate for 1914, and of the fact that it has been widely published and quoted, and diverges so widely from my own, it is perhaps only right that I should indicate wherein the main divergence lies. For "Lands" my estimate is 150 millions less, for "Companies and Trades" generally it is nearly 900 millions less, though for a specially selected group it is 200 millions more. In the case of his capitalization of the income of non-taxpaying classes derived from capital, Mr. Crammond has put 1,000 millions against my 200 millions, because he has quite confused this old entry of Giffen's with the *full* capital of the lower classes, and has ignored the extent to which the *gross* figures for income tax already capitalized by him in his remaining figures cover the ground. His figure for capital in investments abroad on which income is not brought home, was 500 millions more, and his figure for movable property 200 millions more. Except as to the last item, which is merely a matter of individual judgment, I remain of opinion that the

best evidence supports my figures rather than his; that he has not made himself sufficiently acquainted with the character of the original data, and that his aggregate estimate is far too high. He gave the wealth per head in Germany as 227*l.* against a British average of 336*l.* His methods lead to appreciably higher figures than those arrived at by Sir Leo Chiozza Money in "Riches and Poverty" or in "The Nation's Wealth"

In the *Economic Journal* for September, 1918 ("An estimate "of the capital wealth of the United Kingdom in private hands") I have shown that the national wealth, as estimated by the multiplier upon the data supplied through individual returns of wealth, is reconcilable with the estimate that *would be made* on the Giffen (or capitalization of income) basis with our *existing* income tax figures, if we had similar taxation on *individual statements of income* and not taxation at the source. That is to say, the gap between the old estimate by the capitalization method and the estimate by the "multiplier" estate duty method is not substantially greater than the gap between the capitalization method for income tax *assessments* at the source, and the capitalization of income admitted on personal statements for super-tax, abatements, &c., in the same scheme of taxation for the same year. I also checked the estimate in *British Incomes* in sections by reference to the results of the new Land Valuation, the Census of Production, and the capital invested abroad, and I concluded that there was no evidence to justify any substantial additions. I therefore remain of the opinion that 15,000,000,000*l.* was an outside figure for the year in question for the total national wealth, of which upwards of 3,000,000,000*l.* would not have been returnable by individuals in statements of wealth for the purposes of a capital levy.

The Estimate of Income is generally made up of three parts:—

(*a*) The income of income tax paying classes, from the tax statistics.

(*b*) The income of wage-earning classes.

(*c*) The income of others below the income tax limit (made the subject of a special enquiry by the British Association a few years ago).

Dr. Bowley has so recently reconsidered these factors that I cannot do better than repeat his conclusions.[1]

The section under (*a*) was carefully considered by me in *British Incomes*, and he has accepted all my conclusions. The summary is:—

[1] "The Division of the Product of Industry—an analysis of National Income before the War."

	Million £.
Wages, small salaries, &c.	1,046
Incomes over 160*l.*	936
Miscellaneous	108
	2,090 for 1911,

and on similar lines rather over 2,250,000,000*l.* for 1913-14. He concludes, "I am unable to obtain the figure of 2,400,000,000*l.* "frequently stated as the pre-war income without making "extravagant estimates of wages or of incomes from abroad." The totals arrived at on these principles for 1907 were reconciled with the results of the Census of Production by Mr. Flux on the "Net Produce" method; and they have also, very roughly, been shown to be consistent with the annual values of residences, and the gradation of wealth indicated by the House Duty statistics. At an earlier date (1903) Giffen obtained a figure from "total con-"sumption" which tallied with the direct results.

I think that on the whole the estimate of income, having regard to the nature of the data and the methods employed, is perhaps the most accurate available for any country, and is certainly in Grade I. My estimate for capital taken alone, would have been placed in Grade II, but, in view of the consilience of other lines of evidence, it is fairly safe to say that the range of error is not greater than 10 per cent., though it certainly cannot be affirmed to be much less.

6. The United States of America (excluding Alaska and the Island Possessions).

The fountain head of practically all information on the subject of American wealth is the "Census" conducted by the Washington Bureau. The first census was in 1850, and it was repeated at decennial intervals down to 1900, and then taken in 1904 and 1912. The latest figures for the purposes of this Paper are taken from the *Bulletin of Estimated Valuation of National Wealth*, dated March 10, 1915, which gives the statistics for 1912. A comprehensive work, *The Wealth and Income of the People of the United States*, by Dr. King, of Wisconsin University, deals very lucidly with the results of the censuses from 1850 to 1904, and can hardly be improved upon as a fair and critical review of the material presented in a broad and popular way. Other monographs exist in fair numbers, but they are practically superseded by this work. In his judgment the earlier census estimates were only broadly representative of the facts, but in the recent ones we may accept the results with "a very "considerable degree of confidence," for there has been progressive improvement in the methods adopted by the Government Depart-

ments and in the quality of the statistical material. An interesting summary of the results may also be read in *The Private Wealth of Australia*, by G. H. Knibbs, published in 1918.

Capital.—Although the American method is called a "Census," it is more strictly an inventory, as far as possible on a tax basis, for it does not require individual statements of personal wealth, but delegates the construction of the inventory to a large number of officials for different areas, under careful uniform instructions. Thus it has advantages over an inventory compiled by a single statistician working for the whole country at once, for it works in detailed touch with all local conditions and variations, and thus obviates the risks attaching to averages, or even to weighted averages. But, on the other hand, there is always difficulty in getting a number of investigators to act upon a strictly uniform principle. The American Census has always been very dependent upon the data furnished by its system of taxation, and therefore belongs just as much to the estimates under the taxation class as others which have never been dignified by the name of "census," and it is clearly in a different category from the Australian Census. The accuracy of the valuation for the general property tax has always been a critical point, practically dominating the whole estimate. In 1850 the officials were asked to state the true valuation as well as the assessed valuation, by adding a percentage to the latter. The proper percentage to add was certainly not acknowledged or known at that early date. A similar instruction was given in 1860. In both these years property belonging to foreign residents was included and State property omitted. The 1870 Report claimed that the addition to compensate for under-assessment had been made with great nicety by competent investigators, but admitted that nothing more than an "impression" could be given of the amounts of personal property omitted from assessment. The valuation was then $24,055,000,000, or 4,940,000,000*l.* on a gold basis. In 1880 the attempt at correction was very elaborate, and from enquiries in many directions it was determined that assessed values were, as a whole, 65 per cent. of true values; but the Acts of 1899 and 1902 (resulting in the censuses of 1900 and 1904) were efforts to place the investigation on a still firmer footing. Franchise properties like railways and tramways were valued by a capitalization of net earnings; ships were taken on building costs written down for depreciation; mines were valued on the survey reports, while personal property was taken on four years' national purchases, checked by a method of sampling individual households, and their insurance policies.

In 1912 the following points are of interest:—Taxable real property

was considered to be assessed at 11·7 per cent. of its value in Iowa, and 15 per cent. in Nebraska, as against 100 per cent. in New Hampshire and Wyoming. The exempt property was taken as a proportion (one-eighth) on the sample of the three States for which it was separately given. Livestock and agricultural products were valued according to the official returns from the Board of Agriculture, and on the results of previous censuses; gold and silver coin and bullion, railroad and equipments, cars, &c., shipping and canals, mining products, &c., were similarly estimated from appropriate official reports. For manufacturing machinery, tools, &c.—the proportions ascertained in 1904 were adopted. Tramways, telephones, electric light and power, were taken at the cost of construction. The valuations of manufactured products were based upon previous censuses, and it was assumed that one-twelfth of the value of foodstuffs, and one half of the value of other products were in merchants' stock, and that there was a two months' supply of factory materials in stock. A six months' stock of imports was assumed, while furniture and similar movables were taken as the products and imports of the period from 1904 to 1912, added to 20 per cent. of the 1904 value, and light articles (such as kitchen utensils) were estimated at a year's product. The following table in sterling is taken, in an abridged form, from G. H. Knibbs' work:—

Form of wealth.	In million £.		
	1900.	1904.	1912.
(*a*) Real property taxed	9,519	11,405	20,212
(*b*) ,, ,, exempt	1,277	1,404	2,533
(*c*) Livestock, farm implements, &c.	833	1,011	1,563
(*d*) Gold and silver coin, &c.	345	411	538
(*e*) Railways, Pullman cars, &c.	1,877	2,336	3,343
(*f*) Tramways....	324	456	944
(*g*) Telegraphs and telephones	125	167	286
(*h*) Shipping, canals, irrigation	111	174	380
(*i*) Privately owned waterworks, electric light and power	138	173	491
(*j*) Agricultural products	299	390	1,076
(*k*) Manufactured products	1,250	1,522	3,019
(*l*) Mining products	67	84	167
(*m*) Imported merchandise	87	102	170
(*n*) Manufacturing machinery	522	678	1,252
(*o*) Clothing, ornaments, furniture, &c.	411	514	882
Total National wealth	18,188	22,008	38,577
Population	75,994,575	82,466,551	95,410,503
National wealth per head of population	239*l.*	267*l.*	404*l.*

Year.	Money value of the economic goods possessed by the people of the United States in £.		"Active capital."										"Consumption goods."		
		Year.	Total "Active" capital.	Business buildings and land machinery	Railways.	Other public utilities	Movable machinery, tools, implements.	Live-stock.	Farms.	*Per capita* value of active capital.	*Per capita* value after adjustment by price index.	Total.	*Per capita* value.	*Per capita* value after adjustment by price index.
	Mill. £.		Mill. £.	Mill. £.	Mill. £.	Mill. £.	Mill. £.	Mill. £.	Mill. £.			Mill. £.		
1850....	1,466	1850	566	229	94	37	82	123	1	24½	17	476	20	15
1860....	3,320	1860	1,212	444	317	66	127	246	2	39	27	862	27	19
1870....	6,160	1870	1,845	611	548	90	248	345	2	48	22	1,226	32	14
1880....	8,968	1880	2,802	846	967	140	488	356	5	56	42	1,983	39	30
1890....	13,365	1890	3,965	1,171	1,448	270	548	521	6	63	55½	3,132	50	44
1900....	18,188	1900	5,092	1,490	1,578	667	823	557	7	67	66	4,280	56	55
1904....	22,008	1910	9,856	2,733	2,795	1,997	1,232	1,090	10	107	85	6,776	74	68

After considering carefully the data and the method of valuation for 1912, my own impression is that a range of possible error of ± 5 per cent. should be assigned to (*d*), a range of ± 7½ per cent. to (*a*), (*e*) and (*h*), of 10 per cent. to (*c*), (*f*), (*g*), (*i*), of 20 per cent. to (*b*), (*j*), (*l*), (*m*), and of 30 per cent. to (*k*), (*n*) and (*o*).

The net effect of these estimates is a range of possible error over all of ± 13 per cent. Although it is extremely improbable that all the errors could be in the same direction, and it is therefore likely that the net error must on this showing be much less than 13 per cent., I do not feel that the estimate can properly be put into the first grade. It is difficult to judge whether, if all profits were capitalised, the plus and minus goodwill would so balance as to leave the result practically equivalent to this inventory of hard assets, and I am never completely reconciled to any valuation which ignores the valuation as a "going concern," on the actual earning power of the separate aggregations of assets. A few of the above items have been valued on this basis, but only a small part of the whole has real relation to current earning power.

The table on the previous page is made up from various sections of Dr. King's book.

It may be mentioned that the French writer, Neymarck, adopted an estimate of 25,900 millions for 1913. Rising land values constitute a growing fraction of the nominal increase of wealth, for in 1850-60 they were one-third only, and in 1900-1910 three-fifths of the increase is for higher land values.

Income.—Dr. King says that "with existing data" it is difficult, if not impossible, to estimate with great accuracy, the total value of the national income. He considers that it can be attempted in two ways:—(1) the consumption of the people, and (2) the production of the nation. As regards (1) there is little information on retail prices, and it is difficult to avoid duplicating items, for there is much "consumption" that takes place for further production, so that (2) is the more workable. He tried the method of multiplying the book income of families by the number of families in the class, and also tracing the process of production from nature to the final consumer, and found that for 1910 the totals were not greatly different, but the second process necessitated less guessing than the other. The following table shows the chief results:—

United States National Income.

Year.	Total money income.	*Per capita.*	Corrected for price.	Per family.	Price.	Total estimate capital savings.	Net goods consumed.
	Mll. £.	£	£	£	£	Mll. £.	Mill. £.
1850....	455	19	14	110	79	82	373
1860....	747	24	16	126	89	173	574
1870....	1,380	36	16	183	82	215	1,165
1880....	1,519	30	22	151	114	260	1,259
1890....	2,482	39	35	193	170	330	2,152
1900....	3,693	49	48	228	224	322	3,371
1910....	6,272	68	54	307	243	411	5,861

Dr. King considers that the error in 1850 may be at least 25 per cent., but that the years 1900 and 1910 are correct within 10 per cent. Spahr's work was the chief authority for prior years, and it gives 2,220,000,000*l.* for 1890, or 11 per cent. less than King. As the estimate stands, unchecked by any taxation data, it is in the second grade, but after the lapse of a few years such statistics should be available from the recently instituted income tax as to make a much closer estimate possible. The early years of a new tax never give complete and reliable statistics of wealth, but the details published in 1918, for 1916, by the Treasury, so far as can be seen, lend support to Dr. King's work. The exemption limit is high, and much careful work by investigators with first hand knowledge of the material is necessary to render real assistance upon the problem.

A recent writer[1] has made a computation for 1917 and 1918 on the income of the United States as a whole, and as subject to excess profits and income taxation. He adopts the same method as Dr. King, who gave nearly 6,275 millions for 1910. The Hon. A. C. Miller, of the Federal Reserve Board, put the income for 1917 at rather more than 10,000 millions.[2] Professor B. M. Anderson, of Harvard, put the figure as high as 14,000 million.[3] for 1917, by adopting King's 1910 basis and adding 31 per cent. for increased production and 71 per cent. for increase in prices. Mr. Friday's own estimate is 13,400 millions, obtained by the "net product" method, which may be said, despite the enormous inflation and the difficulty of handling the figures consequent thereon, to confirm King's work. The point to be considered here is the extent to which

[1] David Friday, "The Taxable Increase of the United States," *Journal of Political Economy*, December, 1918.

[2] "War Finance and Inflation," *Annals of the American Academy of Political Science*, January, 1918.

[3] *New York Times Annalist*, January, 1918.

the 1917 figure is confirmed by the income tax data for 1917, after detailed consideration. He finds that the total income subject to tax was nearly 3,700,000,000*l.*, but he is not able to relate this to the *total* income for the year. All that can be said is that the ratio of increase in taxable income from 1913 to 1917 is roughly comparable with the ratio given by the net product method. Probably when the definite comparison between the results of the two methods comes to be attempted it will be found that the American individual income returns suffer in the same way, statistically, as our own. They will quite fail to exhaust the share of the total income (as taxed at the source) assignable to the classes concerned. Dr. R. P. Faulkner has stated that out of $2,000,000,000 of dividend income, super-tax methods account for only $491,000,000.[1]

7. The German Empire.

The most frequently quoted source of information for Germany is the work entitled *Deutschlands Volkswohlstand*, 1888–1913, by Dr. Helfferich, Director of the Deutsche Bank, published in 1913. It represents a clear and able attempt to get a close approximation to the aggregate income and capital. The estimate for national income is based upon the Prussian income tax returns for 1912, on the following lines :—

	Million £.
1. Net total incomes of taxpayers with incomes of over 3,000 marks	326
2. Taxable incomes of taxpayers with incomes between 900 and 3,000 marks, calculated from the arithmetical average of the taxes paid by various classes within this group	421
3. Income of certain exempted persons on an average of 1,500 marks	46
4. Incomes of tax free individuals and heads of households, assuming a minimum average income of 750 marks	299
Total income of personal taxpayers and persons exempt	1,092

The corresponding totals for earlier years were :—

	Million £.
1896	629
1901	752
1906	855
1911	1,058

[1] *Journal of American Statistical Association*, 1914, page 521, "Income Tax Statistics."

An addition is then made for income tax evasion amounting to 10 per cent., which is the estimate given by "most authorities." As only the *dividends* of companies appear in personal returns, the undistributed profits or reserves are then estimated on the basis of *one-fourth* of the income assessed for impersonal taxpayers, or nearly 11,000,000*l.*, bringing the Prussian aggregate income up to about 175,000,000*l.*, an "average income of 600 marks per caput."

Dr. Helfferich then declares that a "thorough examination of "the assessment results" (Durchprüfung der Ergebnisse der Veranlagung) "in the other States having an income tax system suitable "for purposes of comparison, shows that this average may be taken "as representing, approximately (ungefähr zutreffendes Mittel) "the average income for the whole Empire. In Saxony the average "is rather higher, in Wurttemburg and Baden somewhat lower, in "the Hansa cities—with an average of nearly 1,000 marks—con-"siderably higher, and in the relatively poor Thuringian States "considerably lower." Applying the Prussian average to the whole Empire (with its population of about 66 millions) he gives a grand total of private incomes of 1,910,000,000*l.* to 1,960,000,000*l.*, to which he adds 50,000,000*l.* for the net incomes of public corporations, Federated States, Revenues, making in all 1,960,000,000*l.* to 2,010,000,000*l.* His calculation for 1896 on similar lines comes out at 1,050,000,000*l.*, or 410 marks per caput, so that there was an increase of 80 per cent. in aggregate, and 45 per cent. in individual income. Helfferich says: "the modest character (Wie "mässig) of the estimate is seen by comparison with Schmoller's "estimate for 1895 of 1,225,000,000*l.*, which, on the same "basis of increase, would amount for 1911 to 2,200,000,000*l.*" Helfferich omits to note that if he had allowed a wider margin for income tax evasion in 1896 than in 1912—which by all the literature upon the subject is clearly proper—then his own estimate for 1896 is too low, and approximates more closely to Schmoller's figure, while the operation of raising the latter to the 1911 basis is not justified. He considers that Steinmann-Bucher's estimate of 1,710,000,000*l.* for 1908 agrees substantially (in ungefährer Uebereinstimmung) with his results.

In a fifth edition (1915) of his book, translated into French, Helfferich says that no fresh statistics are available, and for 1913 he makes a "trifling" increase of 120 millions, bringing the total to 43 milliards of marks, or 2,105 millions sterling.

On a critical review of Helfferich's data and methods, I conclude:—

(*a*) That there may be 5 per cent. error in the estimate of tax free incomes either way.

(*b*) That the 10 per cent. addition for evasion is a minimum figure, and that the figure may possibly be even 20 per cent. The comparison between the supertax and abatement statistics, and the income tax at the source in the United Kingdom, which I made in the *Economic Journal* in September, 1918, is an instructive analogy on the possible extent of this margin. But in applying it to these figures, I have allowed for the corporate income under "c."

The introduction of the "amnesty" provision in the 1913 law, as well as the remarks of candid critics of the German administration, indicate that the loss due to evasion may well exceed 10 per cent. The Prussian system is admittedly strict in its scrutiny of the accuracy of items *revealed*, and also of the presumptive agreement of the aggregate income with the style of living, but there was no exhaustive method of referring all objective sources of income in detail to individual dossiers.

(*c*) The addition for company reserves cannot well be more than 25 per cent. below the figure given, but may easily be 50 per cent. above it.

(*d*) The use of the Prussian income per head as the basis for computing the incomes of the rest of the Empire is not invalidated by any *prima facie* improbability as to its correctness, though at that date the absence of any reliable comparison for such a large State as Bavaria is an important source of difficulty. It seems, at any rate, possible that the average for the whole Empire might differ from that for Prussia by 5 per cent., or, at any rate, that the non-Prussian States might differ from Prussia by 10 per cent.

(*e*) In the estimate of public property an error of 30 per cent. is possible.

The net result of these considerations is that Helfferich's mean estimate of 1,985,000,000*l.* may possibly be excessive by 111,000,000*l.* or deficient by 184,000,000*l.*, or say 6 and 9 per cent. respectively, so that it may be classed as a Grade I estimate.

Capital.—Helfferich takes the statistics of the Property tax in Prussia for 1911 as his starting point at an aggregate valuation of 5,100,000,000.

He adds:—

	Million £.
1. For taxable property omitted, 20 per cent.	1,020
2. Private property legally exempt. (Properties under 300*l.* are tax free and those between 300*l.* and 1,000*l.* are free if the owner has less than 45*l.* per annum) 5,400,000 owners at an average of 122*l.* and 240,000 at an average of 392*l.*	758
3. Furniture, utensils, clothing, &c., 10 per cent. of (1) and (2) above (17*l.* per head)	735
4. Property in impersonal ownership....	245

The aggregate thus becomes 7,850,000,000*l.*, or about 196*l.* per head in Prussia, and, on the assumption of a like basis for the other states, 12,750,000,000*l.* for the Empire.

He then adds the State railways, which represent 835 millions of invested capital, but which were worth, in his judgment, 1,000,000,000*l.* to 1,250,000,000*l.*; the profit making concerns belonging to State and municipalities, and further corporations, about 125 millions; schools, churches, parks and similar unproductive property, with military and naval works, from 125,000,000*l.* to 150,000,000*l.* From the last two classes falls to be deducted the public debts about 125,000,000*l.* The grand net total is 13,950,000,000*l.* for 1911.

Helfferich proceeds to check this by reference to fire insurance statistics for 1911 :—

	Million £.
Insured values in public institutions	3,890
„ „ joint stock companies	6,060
„ „ mutual associations	880
Total	10,830

Insurance of German property in foreign companies is not included, and no allowance is made for insufficient insurance or self-insurance, and Helfferich concludes that the aggregate value of real and personal property cannot be *less* than 10,000,000,000*l.* The value of land, as distinct from buildings, has been variously estimated from 1,000,000,000*l.* to Steinmann-Bucher's figure (approx.) 2,500,000,000*l.* Helfferich assumes an average of 80*l.* to 100*l.* per square rod for city areas, and arrives at 1,470,000,000*l.* An average value of 40*l.* per hectare for agriculture and forests, gives nearly 2,000,000,000*l.* more. The last item in his estimate, which he considers to be the most uncertain of all, is that for foreign investments. The Imperial Marine office in 1905 gave 400,000,000*l.* to 450,000,000*l.* as the capital *investments* abroad. The German holdings of foreign securities were put at 500,000,000*l.* in 1892 by Schmoller, and at 600,000,000*l.* in 1893 by the President of the Reichsbank; at 800,000,000*l.* in 1905 by the Marine Office. These two classes of capital overlap, and cannot be added together. Helfferich adopts 1,000,000,000*l.* after allowing for this, and for the securities sold back to foreign countries, and considers it, if anything, too *high*. His whole table is as follows :—

		Million £.
Real and personal property insured against fire	nearly	10,000
Land in Country and City	„	3,500
Mining property....	„	300
Shipping	„	50
Goods in transit....	„	50
Metallic money	„	200
Public property, including railways, not insured against fire	„	1,500
Capital investments abroad	„	1,000
Total	net	16,420

The tax method, therefore, gives a result of 13,950,000,000*l.*, and the fire insurance method 16,420,000,000*l.*, from which Helfferich derives his final figure of 14,750,000,000*l.*, with these as the limits of possibility. Examining the first method in detail and assigning a margin of error to each item, it seems to me that the preliminary aggregate of 7,850,000,000*l.* may be too much by 200 million and too little by 1,270,000,000*l.*, and the whole Empire (12,750,000,000*l.*), therefore 300 millions and 1,900 millions respectively, if the proportion is identical, as assumed. But there may be an error of at least 10 per cent. in the application of this proportion, and of 20 per cent. in the further items, bringing the range of possible error up to—1,030,000,000*l.* and +2,630,000,000*l.* respectively.

Judged by this method alone, therefore, the estimate would range between 12,920,000,000*l.* and 16,580,000,000*l.* And all that can be said about the fire insurance method, which contains no elements with a less range of possible error than 20 per cent., is that it tends to the adoption of a figure nearer the upper limit. At any rate, it would justify one in taking, at least, the mid-point between the two limits, and putting the valuation at 15,550,000,000*l.* Altogether, I am of opinion that Helfferich's estimate is too low by at least 800,000,000*l.*, and that, despite the use of two independent methods, it cannot be classed as Grade I.

Helfferich then also looks at Schmoller's estimate of (approx.) 10,000,000,000*l.* for 1895, and brings it up to 1911 by taking the mean of the percentage increases in property tax figures and fire insurance figures respectively (after deducting one-fourth for more complete insurance and more rigid assessment). This gives rather over 15,000 millions, but is, of course, of little value. The wealth per head is given as 226*l.* to 240*l.* Helfferich deals in detail with the yearly increase of national wealth, and measures it by various tests, from which we may assume an annual figure at 1912 of 500,000,000*l.*,

to be closely approximate to the truth. His 1914 figure would therefore be 15,750,000,000*l.* and my own modification, as suggested, 16,550,000,000*l.*

It must be borne in mind in connection with statements—generally unaccompanied by any data which can form the object of criticism and examination—placing the capital vaguely in the neighbourhood of 20,000 millions, that ulterior motives were particularly likely to exist in German propaganda, and that too much credence can easily be given to vague estimates. Even Helfferich had it in his mind to make out as strong a case as he could, and the tone of his first edition is further exaggerated in the more recent editions (1915). He said, "We are no longer at the mercy of "borrowed capital, nor is a financial blockade possible, since the "days of the Morocco and Tripoli and the Balkan crisis. We built "our fleet and increased our army without having recourse to a loan "for the purpose, and moreover devoted an equal sum to workmen's "insurance, a feat unparalleled elsewhere, and we have repaid foreign "loans. The results of the war have so far justified all we expected "from Germany's economic and financial preparations." (N.B.—The word used is "Rüstung," a term rarely employed in the German language otherwise than for military preparations.) "A few weeks "before the outbreak of the war we regarded it as a matter of "world-wide importance to dispel the illusion that financial tactics "could secure what hitherto neither military power, nor alliances, "nor ententes, could bring about, namely, the destruction of "Germany, and we may consequently hope that the future course "of the war will eradicate the illusion once for all and show the world "that Germany is equal to any rival. Whosoever fails to destroy us "by steel and iron need not hope for salvation from the British "Chancellor's 'silver bullets.' In order to maintain the conquered "lands and secure further territory, we must learn from the mistakes "of others."[1]

The editor of the journal from which the above is cited, goes on to remark that previously it could only be conjectured what motives gave rise to the publication and gratuitous distribution of the book, but that now the reasons are abundantly clear. With such an object it can hardly be supposed that Helfferich would knowingly have neglected any opportunity for stating the national wealth as fully as could plausibly be supported by evidence. As a French writer has recently said concerning German estimates, "their "authors have not usually been either modest or moderate." Professor Ballod has made a recent attempt on the following lines:

[1] *Stock Exchange Gazette*, January 9, 1919.

	Million £ (approx.).
Rural property, built and unbuilt	3,900
Urban	3,600
Shares	1,750
Public debt	1,750
Foreign property	1,230
Private industry....	720
Trading stocks	500
Various public debts	4,450
State debts	1,000
	18,900
Deductions: foreign holdings, &c.	2,000
	16,900
"Increase" in rural property since 1914	1,000
	17,900

or in round figures, 18,000 millions.

He admitted that this total bore traces of inflation, and that after the war the values would shrink, but he was considering the immediate fiscal position and the basis of taxation. In my judgment his estimate does nothing to disturb the approximations already reached on Helfferich's basis.

The most notable recent contribution is that by Steinmann-Bucher[1], who had reached 17,130 millions for 1908, which Helfferich definitely regarded as too high. The Dresdner Bank, which had already fathered the boastful computations in 1913, took to re-assuring the German people when the war was well advanced, and Steinmann-Bucher "responsible Editor of information for the War "Commission of German industry," did not hesitate to declare at Easter, 1916 (in *Deutschlands Volksvermögen im Krieg*) that Germany "was rich before the war, is still more so during the war, and will "be even richer after the war!" and under the sponsorship of two Professors—Schantz and Julius Wolf—his doctrine was promulgated with profusion of publication throughout the Empire. He insists that when an objective total of market value has been reached, one has only begun the tale of national wealth—there are other elements not to be so measured. "I mean also the ability to acquire "wealth, to conserve and increase it, for this very faculty is in itself "riches." We must consider quality as well as quantity.

For 1914 he reaches 18,800,000,000*l.* to 19,850,000,000*l.* In several items he agrees with Helfferich's inventory, and the main differences arise through taking "real and personal property

[1] *Vide* also *Das reiche Deutschland - ein Wehrbeitrag*, March, 1914, and *350 Milliarden deutsches Volksvermögen*, 1909.

"assessed against fire" at 10,000,000,000*l.* to 11,000,000,000*l.*, or 1,000 millions more, and "land in country and city" at 5,000 millions instead of the 3,500 millions adopted by Helfferich. Public property is put at 2,000 instead of 1,500 millions. His estimate of insured values does not seem to be free from the possibilities of double entries while, in dealing with the value of property he has preferred, as a basis, Prussian statistics of sale prices to the taxation rolls. The whole mentality of his work (and an apparent rivalry and jealousy between the two great banks) leads to the view that he would stretch every point to the utmost to prove his thesis. If we accept his figures we are faced with the fact that the boasted Prussian tax system, with all its bureaucratic and police accessories, must have been, in fact, ineffective to a degree, and I do not think the balance of evidence supports a higher figure than 17,000,000,000*l.* as the capital wealth of Germany in 1914, and I prefer the more conservative modification of Helfferich's methods, already given, viz., 16,550 millions.

The French writer, Péret, prefers an even lower estimate than Helfferich's own figure, for he considers the fire insurance statistics exaggerate the facts.

8. FRANCE.

The best work on the subject in recent years is a comprehensive treatment by René Pupin (*La Richesse de la France devant la Guerre*), published in 1916, while a briefer but useful summary of the data was made by Raoul Péret, Deputy, and former Minister of Commerce, the general reporter of the budget, in 1917.

In recent articles in *Économiste Européen* (February, 1918) E. Théry, author of "La fortune publique de la France" (1912), has made new computations of the capital wealth for 1912, following upon his estimates for 1892 and 1908.

Pupin expected to be criticized for arriving at figures in excess of previous investigators, but he is convinced that for many years the wealth of France has been underestimated. About 1906 to 1908 the "private wealth" had generally been put at 8,720,000,000*l.*, whereas Pupin, though regarding the total annual additions as 720,000,000*l.* only, reaches 11,300,000,000*l.* for 1911. In the same way the income had been put at 1,110,000,000*l.* to 1,190,000,000*l.*, and Pupin reached 1,430 millions. He claims to establish that the share of national dividend going to "capital" is clearly less than that going to "effort," that, taken together, they make 13 per cent. on capital, and that 10 per cent. of the annual income represents the net annual addition to capital.

Income.—Pupin recognizes four possible methods of estimation:

(1) That used by the Administration des Finances, viz., a co-efficient giving a constant relation between rental values of premises and the incomes of their inhabitants.

(2) The computation of income from the amount of taxes paid.

(3) Classification of trades, &c., according to local areas, with a "co-efficient of productivity."

(4) "Successive approximations," as adopted by de Foville.

He employs the last, and seeks to find the "net income" or annual produce from capital and work which the French are able to dispose of after paying all general expenses of their enterprises. Basing upon the 1906 occupational census, he uses the average wages or earnings for each class or category. The Ministry of Agriculture furnished adequate data in 1913 (farm labourers, 45*l.*; women, 27*l.*; male domestics, 40*l.*; female domestics, 30*l.*, or an average over all of about 39*l.*).

His summary table of personal incomes is as follows:—

	Million £.
From capital—	
Landed property	80
Buildings	108
Stocks and shares	176
Savings bank, pensions, bank deposits, &c.	36
	—400
From effort—	
Agriculture (4,047,000 persons)	148
Industry (6,215,000 persons)	277
Commerce (1,437,000 persons)	58
Professions (100,000 persons)	4·8
Public officials (655,000 persons)	35
Domestic service (946,000 persons)	38
	—560
Army and Navy (593,000 persons)	25
From capital and labour—	
Farming	132
Commerce and private industry	148
Liberal professions	33
	—313
Total income of all kinds	1,298
Deduct 10 per cent. from the income from shares for income from other sources already counted in this summary	18
Total of individual incomes	£1,280

Some important additions have to be made to this figure to bring it up to the "national" income in the ordinary sense:—

(1) 20 millions for undistributed company profits.

(2) 96 millions for *subsistence* of 4,800,000 persons living on the holdings of their farms at 493 francs per head, which can be increased to 140 millions when the whole families are included.

(3) 3·6 millions for land belonging to the State, the Départements and the Communes.

The income from landed property is based upon the estimates of capital values, together with the percentage ratios obtained by administrative investigations, and is unlikely to be in error by more than 5 per cent. An inquiry in 1909–10 gave a gross value for 133 millions for dwellings and 14 millions for factories, and Pupin deducts 25 per cent. from the former and 75 per cent. from the latter to get net values, with an addition of 4 per cent. from 1909 to 1911. The gross figure is probably correct within 5 per cent., but the deductions are extravagant, and I incline to the addition of 10 millions to his net result. Accepting the aggregate capital value average of stocks and shares adopted for the capital valuation, the return thereon was taken from various investigations at 4 per cent. This average is not a carefully weighted one, and may be in error by one quarter per cent., or one-sixteenth of the estimated return. The return from Savings Bank and other bank deposits is built up from various statistical sources under nine heads, and would err only by omissions; in fact, Pupin himself says "au total les "revenus de cette catégorie auraient largement dépassé 900 millions "en 1911; dans notre désir de demeurer plûtot en dedans de la "réalité, nous porterons ce dernier chiffre." The estimates of earnings and wages are based upon the occupational census of 1906, with an addition, small it is true, but adequate for French conditions, to bring the figures up to 1911. In agriculture the report of an official inquiry for 1910 (published 1913) by the Ministry of Agriculture, furnishes the required data, and the general average wage is 43*l.* for men and 28*l.* for women. Pupin's net figure, after a reduction for the slack season, makes no provision for value of board and lodging to farm hands living in, which would have been charged as an expense in arriving at the farmers' profits. It cannot be put at less than 6 millions. The possibility of error under the main heading is at least 10 per cent.

For wages in industry generally, Pupin has no scientific *ad hoc* data, but relies upon (*a*) the statistics for mines and quarries in 1905 (which show that 195,000 workers shared just over 10,000,000*l.* or about 52*l.* per head) putting his figures at 54*l.* per head for 1911; (*b*) investigations by Lavergne and Henry (1906) indicating for male workers 86*l.* in Paris and 49*l.* elsewhere, and for female workers 48*l.* in Paris and 24*l.* elsewhere. These are weighted for the general average, increased by 3 per cent. for the further five years, and give 55*l.* per man (applied to 4,005,000 workers) and 20*l.* per woman (applied to 2,210,000 workers). A small reduction is made for 800,000 transport workers. It will be seen that the samples upon which the estimate is based are small and out of date, and it may well be that the result is 10 per cent. too high or 20 per cent. too low.

For commerce, examples are drawn from a branch bank, an "Établissement de crédit," and the result of "observations" in 1905 showing, for men, 74*l.* in Paris, and 40*l.* elsewhere, and for women, 40*l.* in Paris, and 24*l.* elsewhere. With an addition to bring the figures to 1911, it is 49*l.* throughout for men and 28*l.* for women, applied to 916,000 men and 521,000 women. The figures are so low that it does not appear possible the estimate can err in excess. Public officials are taken, after sample inquiry, at 60*l.* for State servants and 48*l.* for local officials, while the Army and Navy figures are closely known. Domestic servants are averaged at 40*l.* per head per annum.

The income from industry, &c., is taken under farming, commerce and professions respectively. The farming "net produce" is 36 millions, adopted from official statistics, and subjected to a comparison between 1892 and 1912 in the prices of produce and the level of expenses, and Pupin adds 96 millions for the remuneration of 5 million "farmers." Renoult in 1905 gave 12*l.* per head, but Lavergne and Henry, working upon Coste's details (for 1892) put it at 17*l.* 15*s.* There is a possible underestimate in this case of at least 10 per cent. In commerce and private industry the details are very meagre; 897,700 businesses from 1 to 50 workers each, or an average of 3, are assumed to make 160*l.* each; 180,000 establishments of a more modest character, without wage earners, are put at 80*l.* each. The professions are taken in detail, with estimated profits for each sub-class. As examples I may mention: doctors, 180*l.*; dentists, 120*l.*; veterinary surgeons, 120*l.*; teachers, professors, &c., 60*l.*; barristers (including the briefless), 60*l.*; artists and writers from 48*l.* for half the number up to 480*l.*, for the "aristocratic" 5 per cent. of the total number; engineers and architects, 120*l.* for heads of firms, and 60*l.* for assistants, &c. These averages all seem to be astonishingly low to English ideas, but it may be assumed that Pupin has not written without considerable knowledge of actual French conditions.

His actual gross total of 1,430,000,000*l.* may, in my judgment, be too much by 80 millions, or too little by 170 millions, and the estimate standing alone must be put in Grade II.

Péret's estimates for land and buildings, based on the administration of direct taxes, are the same within 2 millions; learned professions within 1 million.

For "commerce, industry, public functions and offices" (calculated by the method of "average relation" between the principal of the licence tax and the revenue of the professions in 1907) he gives 220 millions against Pupin's 173 millions, a difference which is largely counterbalanced by his 108 millions for "profit of agri-"culture" (based on the report of the Commission of Fiscal Legislation of the Chamber of Deputies, on the Income Tax proposal 1907), which is 24 millions less than Pupin's figure. Salaries, wages and pensions are put at 480 millions, and the income from personal property at 160 millions, making a gross total of 1,200,000,000*l.*, which, Péret himself says, is a "very low estimate."

Capital.—Pupin's valuation upon the direct method, as at the end of 1911, is given in the table on the next page, side by side with those by Péret and Thèry (1912), in order that they may be compared in detail as far as possible.

Land.—Pupin and Péret take the results of the inquiry by the Ministry of France in 1908, but Pupin, after endeavouring to show its consistency with the statistics of 1879 (by means of index numbers of prices, &c.), adds 320 millions for the enhancement in value between 1904 (which he treats as the true point in time for the official value) and 1911. He then deducts 112 millions as the value of lands belonging to the State, Départements and Communes. M. R. Salefranque, writing in 1914 on "Les transmissions immobiliers "devant l'impôt," adopts the original values of 1878, as proper to 1914, by a comparison of the prices of produce. This figure, 3,640 millions, is probably considerably too high, but there is little doubt that the valuation by reference to the direct tax roll gives too low a result, possibly by 10 per cent.

Buildings.—Pupin and Péret adopt the findings of "L'administration des Contributions Directes" for 1909. Pupin adds for the increase in value for two years 64 millions. The underestimate, after dealing with the various considerations put forward by him, may well be 10 per cent. Indeed, other French writers have put the value of land and buildings *in* 1908 at 5,695 millions instead of Pupin's 5,368 millions for 1912, and Péret treats the figures as underestimated.

On the other hand, the mortgage debt of 600 millions (Michel's estimate) is not deducted (except by Pupin to the extent of 100 millions). Thèry's total for these two classes, which he divides a little differently, is rather greater, 5,536,000,000*l.*

Pupin.	Million £.		Péret.	Million £.		Thèry (1912).	Million £.	
Land		2,688	Land (1909-10)	...	2,480	Land	...	3,116
Buildings, &c.	...	2,080	Buildings (1908-12)	...	2,600	Buildings, &c.	...	2,420
Valeurs mobilières belonging to French people ...	4,400		Government annuity and Treasury Bills	800		Valeurs mobiliers— French	2,770	
Less included under other headings	700		Private personal property other than Government effects ...	1,628		Foreign	1,707	
	3,700		Foreign personal property...	1,200				4,477
Farm capital	420					Farm capital ...	367	
Capital in commerce, private industry and ministerial offices ...	720		Debts, private rent	1,260	3,628	Industrial and commercial funds	412	
		1,140	Offices, business funds ...	140				779
Other moveable wealth ...	...	480	Moveables, furniture, ships and vessels, personal goods	1,400	420	Moveable wealth ...	...	930
			Life insurance	...	60			
			Bank deposits		210			
Savings banks, life insurance, pensions, &c. ...	...	420	Savings banks and pensions	302				
Money	...	312	Cash	...	57	Gold and silver ...	...	378
		11,420			280			12,100
					11,380			

Fonds de Commerce, Industrie privée et stocks y attachés—Farm Capital.—Pupin takes the 1906 general census results and classes the commercial establishments as small, average (employing two to five persons) and large (employing more than five persons). He assigns an average profit of 120*l.* to the first, 320*l.* to the second, and 816*l.* to the remainder, giving 148,000,000*l.* for the whole number. The 630,000 industrial businesses are similarly treated, excluding 20,000 which are assumed to be accounted for in the values of shares, bringing these classes together up to 440 millions. Lavergne and Henry in 1908 had taken the official statistics of *la contribution des patentes*, and arrived at annual profits of 106 millions, which they capitalised at 260 millions only. Pupin suggests that at least three years' purchase should have been taken. These figures do not include stock in trade. In an ingenious work "Les Règlements par Effets de Commerce," Roulleau computed from the total Bills of Exchange stamped in 1911, and their average term, that they represented an average value of 200 millions. Offices are valued, following Lavergne and Henry, at 75,000,000*l.* Farm capital is computed mainly from the known numbers of different classes of live-stock, amounting to 260,000,000*l.*, with an estimate for material. Péret's valuations under these heads are not strictly parallel, and are deduced from declarations of inheritance, with the multiplier of 35.

Valeurs mobilières.—The authority of Neymarck is relied upon by Pupin. Neymarck has certainly made very careful computations as to the total values quoted on the Paris Bourse (165 milliards of francs), but the elimination of one-third (55 milliards) as belonging to foreigners, societies, or held by companies whose shares are a mere duplication, is open to considerable doubt. "Ces 110 milliards représentent la fortune mobilière des capitalistes français, abstrac-"tion faite des titres conservés dans la portefeuille des Sociétés "par actions."

Péret quotes the statistics of the Administration of Registration as to the nominal amount of capital liable to stamp duty. The official estimate of Government annuities and Treasury Bills is 1,020,000,000*l.*, which Péret reduces to 800 to allow for foreign holdings. He considers that the common estimates ranging from 4,300 to 4,600 millions are over-stated.

Other moveable wealth.—Pupin includes furniture, clothing, jewellery and plate, domestic animals, vehicles, ships, &c. For furniture he proceeds upon the assumption that when the letting value of a house is below 200*l.*, the furniture has the greater value, but for premises lower than 40*l.* it has less, and on this basis he gets 80,000,000*l.* This is supported by taking a figure, per head, of

120 francs. Furniture is assumed to be worth a quarter of its cost, and clothing one-eighth (40,000,000*l.*). Vehicles are put at 40,000,000*l.* and ships at 20,000,000*l.* Péret's figure is obtained by the multiplier 35.

Savings Banks, &c.—These items lend themselves better than the majority to direct valuation.

Upon the whole valuation Pupin's total is clearly liable to a possible error of well over 10 per cent., and Péret admits that many of his items are rather below the real figure and that the total must amount to at least 12,000 millions. Thèry's computation is the maximum to which any French writer, giving detail, has committed himself.

As a matter of fact, in France, "the classic home of the method "of the devolution interval," as Gini has said, statisticians have been hypnotised by the multiplier, and in the absence of the strong countervailing evidence that we in England possess, have put such confidence in its results, that they have distrusted the numerous assumptions of the inventory method when it leads to substantially higher figures. Pupin devotes a chapter to the multiplier, and declines to accept the traditional 35, "pieusement recueilli et transmis par les "plumes les plus autorisées." But his modification is confined to "l'annuité mobilière." He finds that in 1891–5, taking 1893, the valeurs mobilières appearing in "l'annuité successorale" amount to 1,574,000,000 francs, and at this time the amount of the "fortune "mobilière" was 78,000 millions, or 55 times as much. Similarly in 1896, the total was 52·4 times as great. He therefore takes as a basis the net values of "Successions" and "donations," divides the total into two, viz., "annuité mobilière" et "annuité comprenant "tous les autres biens," and multiplies the former by 50 and the latter by 35. In this way 7,155,000,000 francs has to be considered. "L'annuité mobilière" is taken as 110,000,000,000 francs divided by 50, or 2,200 millions, and the balance, 4,955 millions, is multiplied by 35 to give the equivalent capital, thus obtaining 283 milliards or about 11,300,000,000*l.* This method is, of course, no check at all upon the inventory method, and is reasoning in a circle, for it uses the inventory to get the multiplier in an empirical way, instead of obtaining a multiplier by independent means as a check upon the inventory. This multiplier is in no sense a true statistical coefficient from vital statistics. Pupin shows that the multiplier of 35 applied in detail gives results which show surprising discrepancies when compared with inventory values. Savings banks deposits, for example, only come to 50 per cent. of the acknowledged figures. He concludes his examination by saying that its lesson is easily gleaned.

"Do not condemn the method of the *successorale annuité*, but correct "it, rejuvenate it, and then it will do you good service; all insti- "tutions are subject to similar exigencies, and the best buildings "can be made to resist the effects of time only if they are properly "restored"—which is a euphemistic way of saying that you must hammer the figures till they fit.

(Since the foregoing was written, and within the past week, the latest edition of Colson's *Cours d'économie politique*, just published, has come into my hands. In the third volume, devoted to this subject, he reaches the conclusion that the capital wealth at the end of 1913 was almost exactly 12,000,000,000*l.*, or 300*l.* per head.)

9. ITALY.

Corrado Gini and Lanfranco Maroi in their works upon the wealth and income of Italy, refer in detail to the investigations and estimates of the following writers in recent years: Nitti (1905), Coletti (1907), Gini (1909), Principalle (1909), Colajanni (1910), Santoro (1911), Gabrielli Wiseman (1915), Benedetti (1916), Coppini (1916), Contento (1917), Savorgnan (1916), Corniani (1918), Gini (1918), and various others. Literary activity on the subject in Italy has evidently been remarkable, and space quite forbids that I should here examine all these efforts. I propose to give brief particulars of two or three of the more detailed investigations.

Million £ sterling.

	Gini for 1914.	Corniani 1914.	Santoro 1910.	Gini for 1908.	Principalle for 1908.
1. Lands, including buildings in rural areas, mines, quarries.	1,760	1,200	1,000	1,480	960
2. Buildings (urban)	800	800	480	640	480
3. Livestock	200	280	240	140	140
4. Money	56	120	68	68	67
5. Deposits, savings banks, deposit and current accounts	304	240	140	176	177
6. "Rendita consolidata" and other public debts	240	480	412	220	220
7. Bills, shares and bonds	264	760	520	252	250
8. Furniture, &c.	460	—	—	120	220
9. Other moveable property	400	120	120	200	
	4,484	4,000	2,980	3,296	2,440 to 2,600

Gini builds his 1914 estimates upon his figures of 1908, by applying the ratio of increase shown by the death duty statistics, which lead from 3,296 millions to 4,000 millions, but he gives good reasons for supposing that actual wealth has increased at a greater rate. Maroi and Gini make a careful comparison with the estimate of Principalle for 1908, and Gini, in the course of his long chapters, presses into service the inventory, the multiplier and the capitalisation methods in turn, as they happen to be available or appropriate. Gini's estimate for 1908 was 3,296 millions against Principalle's 2,600 millions. His predecessors had used the method of the "intervallo devolutivo," and Gini shows why this method, especially in Italy, leads to deficient results. "Gli autori sopra citati non attri- "buivono poi, a mio modo di videre, un' importanza adequata all' "evasione, che essi ritenevano di solo $\frac{1}{4}$ del valore accertato e tassato, "ossia di 1/5 del valore effetivo." Principalle's valuation was based mainly on the inventory method, and it differs from Gini's in attributing values of 960 and 480 millions respectively to lands and buildings against 1,480 and 640 millions, which Gini claims, with justice, I think, to have established. Maroi confirmed the view that no better starting point can be found for estimating Italy's wealth before the war than Gini's 1908 estimate (che è la più rigorosa e scientificamente esatta). Corniani's estimate seems to be a journalistic effort, lacking a scientific basis, and manifestly erroneous in details, as, for example, in the value of lands, although the total valuation is not far wrong.

Gini certainly went to very great trouble in his enquiries in each local area to ascertain the extent of the deficient valuation of land and buildings which, of course, dominate the whole estimate.

The estimate for Italian wealth falls, in my judgment, in Grade II.

The national income of Italy has not been so frequently determined, and no recent details are available. The income tax data are weak, and the occupational census method does not greatly assist. Bogart (*Direct Costs of the Present War*) adopts the current estimate of 800,000,000*l.*

10. SPAIN.

A French writer, M. André Barthe, has recently made a detailed estimate of Spanish wealth:—

	Million £ (approx.).
Buildings	500
Land	1,100
Livestock	160
Stocks and shares	240
Equipment	72
Furniture and moveables	360
State debt	360
Precious metals	80
Banking current accounts	8
Stocks of goods in hand	60
Total	2,940

He rejects the multiplier method owing to the fact that the statistics of the succession duties go back to 1891 only. But the figures of even the highest year, with a multiplier of 27, give ridiculously low results. The Register of Property gives an average letting value for buildings of 20,000,000*l.*, corresponding to a capital value at 4 per cent. of 500 million as against the value by the multiplier method of only 324,000,000*l.*

In the case of land, the products alone are worth 240,000,000*l.* annually, against a capital value on the multiplier method of 373,000,000*l.* The share capital and the profits of large companies form the basis of valuation for business, and smaller trades are taken at an average capital of 160*l.* for 95,000 establishments. Three million families are credited with household possessions on an average of 120*l.* each. The other items of the inventory are calculated in the ordinary way. The value of State lands is cancelled by the entry for the State debt, and collective wealth generally has been included.

Barthe computes the national income on the eve of war, as follows :—

	Million £.
Property and livestock—1,760 millions at 3½ per cent.	61·6
Wages of 2,000,000 workpeople	80·0
Stock, share and State debt	28·6
Official salaries, taxed and not taxed	20·5
Profits of five classes taxed to l'impot des patentes; 389,000 taxpayers at an average of £100 each (corresponding approximately to the tax capitalised at 5 per cent.)	37·5
	228·2

A Spanish writer, F. Bernis, puts the income at less than 240 millions (*Economic Journal*, March, 1919, page 83). These results give the capital per head *prima facie* too high, and the income apparently too low compared with other countries.

11. AUSTRIA HUNGARY.

The most authoritative and recent estimates of wealth are by F. Fellner, who wrote a book in 1913, and also made a report to the International Congress at Vienna. His estimate on the inventory method has been revised from time to time since 1902.

Million £.

	Austria.	Hungary.
Landed property	1,206	830
Mines and foundries	235	93
Buildings	624	357
Means of communication	438	242
Moveable wealth	1,100	554
Investments abroad	216	8
	3,819	2,084
Deduct for debts due to foreigners	288	350
	3,531	1,734
	5,265,000,000*l.* as for 1910-12.	

Neymarck estimates from 5,250 millions to 6,666 millions and Péret, working upon Fellner's figures, 6,175 millions for 1913. As regards income, there appears to be no recent estimate. Bogart (*Direct Costs of the Present War*) relies upon a figure of 1,100,000,000*l.*

12. CAPITAL WEALTH IN OTHER EUROPEAN COUNTRIES.

I now propose to give brief references to estimates which, generally for reasons of language, I have not been able to consider first hand, but for which I am dependent upon intermediate sources, Gini, Péret, Maroi and others.

Holland.—Gini quotes Boissevain's estimate (on various bases) of 880,000,000*l.* or 192*l.* per head in 1892, and by reference to the ratio of probate returns in the two years, increases it to 1,200,000,000*l.* or 205*l.* per head in 1909.

In a comprehensive work on the statistics of National Wealth, National Income and Public Bodies, published in 1917, Dr. Verrijn Stuart brings his figures for 1888 up to date, and covers the period up to 1910. He reaches 1,050,000,000 mainly upon the "multiplier" basis.

Sweden.—Flodström for 1908, working on the inventory method, computed 767,000,000*l.* as the inclusive national wealth (or 633 millions for individuals) being 141*l.* per head. Fahlbeck, on a

similar method, 1913, reached for the year 1908 777,000,000*l.*, or 143*l.* per head :—

	M l'on £.
Agricultural property and State forests	208
Other properties	263
Mines, &c.	29
Fisheries	5
Means of communication	50
Merchant marine	9
Livestock and agricultural produce	55
Machinery, &c., personal moveables	210
Money and foreign credits	23
	852
Debts due to foreigners	75
Total	777

The average rate of increase in the decade was 27,000,000*l.* per annum.

Belgium.—A survey of Belgian wealth published in 1913 by the Finance Ministry of Belgium gave the following estimates :—

	M l'on £.
Land	264
Buildings	235
Personal wealth	545
Cash	17
Furniture, &c.	120
	1,181

or 156*l.* per inhabitant.

As long ago as 1892 it was estimated by Graux and Beernaert at 1,400,000,000*l.* (or 224*l.* per head). Gini raised this to 1,860,000,000*l.* (or 254*l.* per head) for 1908 on the basis of the increase in death duty statistics. But Julin's composite index number "The "economic progress of Belgium" (*Journal*, February, 1911) showed a rise from 116 in 1892 to 187 in 1908, and it would appear that the earlier estimate must have been excessive. On the other hand, the recent estimate seems, *prima facie*, too low, and in the absence of comprehensive revenue or tax statistics, no close estimate is possible. Maroi refers, without quoting authorities, to recent estimates of 2,400,000,000*l.* (or 300*l.* per head) on the eve of war, but it appears to me that it has proceeded on the same basis as Gini and been carried to 1913.

Norway.—Working upon old estimates for 1884 and 1891, Gini arrives at an estimate for 1911 of 184 to 214 millions, or 79*l.* to 90*l.* per head.

Denmark.—Gini quotes 404,000,000*l.*, or 166*l.* per head for 1900.

Switzerland.—Steiger has computed the private wealth of each canton separately for 1900 and 1910. His total was 580,000,000*l.* But Gering and Holz (*Economic politique de la Suisse*) reach 800,000,000*l.*, taking greater account of tax evasion. Gini accepts 600,000,000*l.* to 800,000,000*l.* or 160*l.* to 216*l.* per head.

Russia.—Maroi quotes an estimate of 12,000,000,000*l.*, and Péret says it would amount to "at least" 8,000 millions; while Neymarck puts it from 10,000 to 13,000 millions. They are all wide guesses. The Commission of the Duma in 1910, in reporting on the Income Tax law, estimated the income at 980,000,000*l.*, which seems to be an obvious underestimate.

Turkey is credited by Maroi with 1,400 millions, or 64*l.* per head, and *Bulgaria* with 400 millions, or 90*l.* per head, but Neymarck estimates 600 millions in the latter case. For *Roumania*, Neymarck estimates from 800 to 1,120 millions, and Péret says that it has been "quite recently" put at 860 millions, in which figure were included "the State fortune, railways and forests– but the data "are open to discussion." *Serbia* is given 480 millions, or 105*l.* per head, by Maroi.

For *Greece*, Gini quotes an old estimate (1890) by Skiadau of 2,200 millions, or 88*l.* per head.

13. AUSTRALIA.

The "well informed guesses" put forward by Sir Robert Giffin in 1903 for the various parts of the British Empire, have been relied upon by most writers, but so far as Australia is concerned, they have now been definitely superseded by perhaps the most thorough and complete attempt that has yet been made to ascertain national wealth.

Sir T. Coghlan made reasoned estimates for 1903, in ten classes, amounting to 982,000,000*l.*, or actually less than his estimate for 1890, viz., 1,019,000,000*l.*

In July, 1915, an Act was passed by the Federal Parliament making provision for a war census. In one of the schedules issued by the Commonwealth Statistician in connection with this matter, all persons over 18 years of age, irrespective of sex, possessed of property, holding sums on trust, or in receipt of income, were required to give particulars of the same in such a manner as to show the new value of the property, less debts and liabilities outstanding at December 31, 1914, as well as income from all sources, with deductions of various kinds. The results are set forth in considerable detail in a publication prepared by the

Commonwealth Statistician, entitled "The Private Wealth of "Australia and its Growth as ascertained by various methods, "together with a Report of the War Census of 1915." For Australia as a whole, the final figures were :—

	£
Aggregate of net incomes for year ended June 30, 1915	257,650,251
Number of returns for individuals	2,195,065
Aggregate of net incomes of individuals	241,236,552
Aggregate of net assets at June 30, 1915....	1,643,463,376
Aggregate of net assets of individuals	1,224,225,994

The difference between the two separate statements of income and assets is explained by the fact that the higher figures in each statement include returns from non-resident partnerships, trust funds, companies, and institutions. Income from trust funds is, in the main, included in the "individual" returns of beneficiaries. Similarly, the aggregate of net assets of individuals includes the value of interests in trust estates, assurance and annuity policies, &c.

In the tables relative to income and assets, the allocation to States and territories is based on the locality of residence of the owners or representatives, not on the locality in which the income was earned or the assets are situated. The aggregate of net incomes and assets of individuals, non-resident partnerships, trust funds, companies and institutions for the year ended June 30, 1915, is apportioned among the States and Territories as follows :—

States and territories.	Income.		Assets.	
	£	Per cent.	£	Per cent.
New South Wales	101,382,366	39·34	645,699,068	39·30
Victoria	78,987,957	30·66	565,337,460	34·40
Queensland	34,244,339	13·30	163,803,435	9·97
South Australia	20,129,634	7·81	154,623,129	9·40
Western Australia	15,310,227	5·94	67,869,080	4·12
Tasmania	7,281,846	2·83	44,945,491	2·74
Northern Territories	210,654	0·08	842,734	0·05
Federal Territories	103,228	0·04	342,797	0·02
	257,650,251	100·00	1,643,463,376	100·00

It will be observed that "individual" income is 93 per cent. of "total" income, and "individual" capital is 74 per cent. of "total" capital.

Giffen's figures of 1,100 millions for Australasia in 1903 was, if anything, *below* the actual mark. Mr. Knibbs' volume is interesting, not merely from its full account of a genuine *census* of wealth, but also for its general theoretical examination of the multiplier and its parallel results in practice, the relations between income and capital, and much information on the question of the distribution of wealth.

The method of avoiding duplication between the dividends received by companies and the profits made by companies is described as follows :—

A special tabulation was made of the total assets shown on the cards as comprising shares and debentures of companies and a special return was obtained from all Australian companies showing the undistributed profit during the year under review, including sums transferred to reserves. In the final tabulation of the results, the net assets of all companies were reduced by the amount of shares and debentures in companies shown as being held in Australia, the balance representing, approximately, the amount of outside capital invested in companies operating in Australia. In the case of income, the wealth and income card did not furnish a means of determining the total income derived from dividends of companies. The special returns of undistributed profit mentioned above was consequently taken as furnishing for Australian companies the net income not included in shareholders' returns.

"The net assets of the Australian companies were taken from "special returns obtained from these companies, such net assets "being computed without deducting the liabilities to share and "debenture holders. From the total net assets so computed, the "aggregate amount of shares and debentures in companies shown "on the various individual and other cards was deducted, the "balance representing, approximately, the interest in Australian "companies held by persons not resident, together with the margin, "if any, between the share valuations of the several shareholders, "and the valuation of net assets made by the company officials."

The income relating to non-residents was only just over one million, and the balance (for individuals) represented 48*l.* 9*s.* 7*d.* per head (50*l.* 10*s.* 4*d.* in New South Wales, 50*l.* 11*s.* 2*d.* in Victoria), but, per return, it was 110*l.*

The capital wealth is of course distributed between the States according to the States of domicile of the owners. The total of 1,643,000,000*l.* includes the Australian property of non-residents, estimated as between 150,000,000*l.* to 200,000,000*l.*, but does not include the property of Federal States or Local Governments, so that "the aggregate private wealth of Australian residents as at "June 30, 1915, was approximately 1,470,000,000*l.*, or nearly 300*l.* "per head."

The question of the number of persons owning wealth who made

no return for the census, received careful consideration, and it was decided that the whole measure of uncertainty was "negligible as "compared with that due to unavoidable limitations in the estimate "of values, and perhaps also as to the amount of income." Several classes of wealth were separately aggregated. "Cash in hand" came to nearly 6 millions, and worked out per head of the population at a considerably lower figure than independent estimates made in other ways. It was found that the "net assets" of the companies, making no allowance for liabilities to shareholders and debenture holders, was 286 millions, whereas the individual returns came to 61½ per cent. only, "the balance being presumably held by absentees." There is, of course, the margin of reserve value to which reference has been made, and the general question of plus or minus goodwill valued in the shares, but not included in the assets, is not cleared up. The aggregate value of land (as improved) was 984 millions, and, as unimproved, 456,000,000*l.*, which, so far as comparison could be made, was not out of accord with the information furnished by the Land Tax assessments. Knibbs' work provides a very exhaustive and acute discussion of the probate method in principle and in application, and he concludes that "in Australia it cannot lead to "satisfactory results owing to the absence of the necessary data "regarding settlements. The defect introduces great uncertainty "into determinations from probates, a fact forcibly illustrated "by the necessity of applying a 'correction' factor of about 1·6 to "the results obtained from probates, in order to bring them into "agreement with the estimates obtained by the War Census."

He then makes a complete estimate of Australian wealth on the "inventory method," for 1915 (omitting public property, whether national or communal), and given in detail for each colony. The results aggregated for the Commonwealth are as follows :—

	Million £.
(1) Land and improvements	1,105·6
(2) Live stock and agricultural machinery	123·1
(3) Manufacturing plant	40·0
(4) Mining properties and products	43·6
(5) Coin, &c.	44·4
(6) Railways and tramways and shipping	25·1
(7) Agricultural products	59·5
(8) Locally-manufactured products	54·3
(9) Imported merchandise	31·8
(10) Clothing, &c.	14·9
(11) Furniture, &c.	77·1
	1,619·5
Private wealth per head	**327*l.***

The estimate for lands, &c., is based upon municipal valuations, and represents about two-thirds of the total; in several States which show unimproved or annual values only, the figures have been converted into "improved capital values" by the application of factors. It is probable that this valuation is correct within 5 per cent., certainly within 10 per cent. Annual statistics of the numbers of live stock, of the values of agricultural machinery, of manufacturing plant, &c., are then utilized. Mining properties are taken from statistics of paid up capital and dividends, and may have a larger margin of error. For all the other items there is some substantial basis of estimation, and taken by itself the inventory result might well claim to be correct within very little over 10 per cent.

After adding collective wealth Mr. Knibbs concludes that the inventory method gives 1,760 millions, the Census 1,643, and the probate basis 1,000 millions, and that the Census probably gives an understatement owing to (1) its emergency character, (2) the incompleteness of some returns, and (3) the tendency for persons to suspect taxation motives. The inventory method, of course, covers wealth in Australia owned by persons not living there, but does not include Australian holdings of wealth abroad.

14. CANADA.

The estimates that have been currently used for Canada are Giffen's "guess" for 1903 of 1,350,000,000*l.* and Crammond's figure for 1910 based thereon of 2,072,000,000*l.* with an income of 259,000,000*l.*

We have now available a reasoned inventory published in the *Journal of the Canadian Bankers' Association*, 1915, and made up with information from various sources :—

	Million £.
Farm values	687
Mines and forests	164
Railways	231
Urban real property	618
Manufacturing machinery	62
Livestock and implements	182
Stocks of raw material	164
Carriages and motors	124
Specie	33
Investments abroad	20
	2,285

I think it is quite probable that this estimate is correct within 20 per cent., and I have accordingly classed it in Grade II.

15. JAPAN.

I have been unable to trace any recent estimate of wealth or income, or any reference thereto, in European literature, and Neymarck and Péret say definitely that there is none.

The income tax has now been in force for a good many years, and should furnish the basis of a provisional estimate, if carefully handled. Ordinary incomes under 4*l.* are exempt, and there are numerous other minor provisions for allowances and exemptions which may be studied in the Financial and Economic Annual issued by the Japanese Finance Department. Mr. C. V. Sale in 1911 gave the following estimates for 1907 :—

1,125,000 families paying income tax	70*l.* average income.
8,025,000 families not paying income tax	24*l.* 10*s.* ,, ,,
9,150,000	30*l.*

or a total income of 275,000,000*l.*

I have obtained the weighted average wages for 1913 for nearly one million operatives, employed in 50 trades, with an average wage for each trade given by the official statistics, and find that it does not exceed 12*l.* per head (including about 8 per cent. children), so that it would not appear that the above average could be increased, in view, especially, of the poor return from agriculture. Mr. Sale obtained an average of 27·8*l.* gross produce per family in getting at the above figure. My estimate for 1914 would be on the following lines :—

	£
Income taxed	78,826,000
Allowances and exemptions	80,000
Evasion, 50 per cent. of the income in the lowest grade	18,000,000
And 20 per cent. in the incomes above	12,000,000
	108,916,000
Increase, 8 per cent. from 1908 to 1914	7,132,000
Total for income-tax payers	116,048,000
Lower classes—8,500,000 families at 24·10 average	208,000,000
Total (say)	325,000,000

The *Japan Year Book*, 1910, to which Mr. C. V. Sale has drawn my attention, reports an estimate by K. Yamashita, as at 1904, of the total value consumed, or money spent, by the Japanese given in some detail and aggregating to a figure between 270,000,000*l.* and 295,000,000*l.* This "consumption" estimate rather confirms the above direct result.

There was an estimate of capital quoted in the same work, as at 1902–04, of 1,328,000,000*l.*, or 29*l.* per head, as arrived at by "financial authorities." Another estimate, for 1904, is referred

to by Mr. Sale,[1] as appearing in a work by Igarashi and Takahashi (*National Wealth of Japan*, 1906), which amounted, apparently, to 2,280,000,000*l.*, but I have been unable to examine it in detail. For 1914, on details obtained from the financial annuals and other sources, I put forward the following tentative effort :—

	Million £.
Land	1,100
Buildings	400
Furniture, &c.	150
Specie, &c.	38
State debt raised at home....	100
Local debt	30
Mines	30
Commercial companies	370
Other businesses	100
Savings bank	62
Private railways	6
	2,386

say, 2,400,000,000*l.*

In this I have excluded the value of State businesses (tobacco, salt, camphor, railways) on the ground that they are practically equalled by the State debt held by the Japanese.

16. ARGENTINE REPUBLIC.

According to *L'Anuario de la Dirección General de Estadistica*, published in 1910 for 1908, the private wealth was put at 1,260,000,000*l.*, or 212*l.* per head. A valuation has recently been made by Alessandro Bunge, Director-General of the Official Statistical Office of the Republic, who, working entirely upon the inventory method, reached the following results :—

Million £.

	1908.	1916.
Lands	562	918
Fixed plant	54	93
Buildings	519	588
Household goods and objects of art	130	147
Businesses	128	277
Agricultural profits and produce	108	108
Partly manufactured goods and goods in transit	130	143
Agricultural machinery	16	35
Industrial machinery	35	38
Metals	34	69
Railways	181	202
Tramways, telephones, gas, &c....	52	59
Ports, canals, docks	52	57
Total	2,000	2,824

[1] *Journal of the Royal Statistical Society*, 1911, p. 482.

The amounts per head on this valuation are high, viz., 336*l.* and 356*l.* respectively. It may be taken that this official's estimate for 1914 would be in the neighbourhood of 2,400,000,000*l.*, or about 340*l.* per head.

17. Summary and Conclusion.

I shall now proceed to summarise the foregoing in a single table (see next page), bringing the results as nearly as possible to the same pre-war point of time in 1914, and showing the approximate per capita amounts for comparative purposes. In the grading I have sometimes taken a lower class than the original estimate itself would require, if the adjustment to bring it to the level of 1914 has been considerable.

Comment is perhaps superfluous, but I may remark that the generally higher level of pre-war prices in America (which is reflected in the per capita average) cannot discount the immense absolute lead of the States in real wealth, or the rapidity of its increase. The difference between the United Kingdom and Germany is not so considerable as other writers have suggested, and the effects of the well-known thrift of the French nation are apparent. The Japanese are making immense strides, but over 60 per cent. of their population are engaged in agriculture, and live on an amount per head which would be impossible in Europe—indeed, a comparison with this leading Eastern nation's figures brings out the considerations which I have urged in my opening paragraphs.

I should like to state that I do not pretend to have exhausted the subject, for it is obvious that a complete critical compendium of all that has been done in recent years would take up much space and be an exceedingly laborious task. But if I have succeeded in bringing some kind of order out of existing confusion, even over only a part of the field, I shall have achieved all that I set out to do Apart from any interest there may be in present comparisons, I feel that in years to come, the year 1914 will be taken as the starting point for measuring many kinds of change and development, and that this contribution may have some small measure of utility to future workers. Adam Smith's words in the "Wealth of Nations" may form a fitting conclusion :—

> "Parsimony, and not industry, is the immediate cause of "the increase of capital. Industry, indeed, provides the "subject which parsimony accumulates, but whatever industry "might acquire if parsimony did not save and store up, the "capital would never be the greater." . . . "Whatever, "therefore, we may imagine the real wealth and revenue of a

Summary Table, showing the estimated Wealth and Annual Income of various Countries at the outbreak of War in 1914, and the approximate accuracy of the respective estimates.

Country.	National capital.			National income.			
	Estimates based on the work of	Approximation to same by Grade.*	Amount in million £.	Amount per head of population.	Estimates based on the work of	Approximation to same by Grade.*	Amount in million £.	Amount per head of population.
				£				£
United Kingdom	Stamp	I	14,500	318	Bowley, Stamp	I	2,250	50
United States ...	Official, King	II	42,000	424	Official, King	II	7,250	72
Germany	Helfferich, &c.	II	16,550	244	Helfferich	I	2,150	30
France	Pupin, Théry	II	12,000	293	Pupin	II	1,500	38
Italy	Gini	III	4,480	193	... ...	IV	800	23
Austria-Hungary ...	Fellner	III	6,290	121	... ...	IV	1,100	21
Spain	Barthe	IV	2,940	144	Barthe	IV	230	11
Belgium	Official	III	1,200	157	... ...	—	—	—
Holland	Stuart	III	1,050	167	... ...	—	—	—
Russia	Neymarck	IV	12,000	85	... ...	—	—	—
Sweden	Flodstrom, Fochlbeck ...	III	940	168	... ...	—	—	—
Norway	Gini	IV	220	90	... ...	—	—	—
Denmark	Gini	IV	500	176	... ...	—	—	—
Switzerland ...	Gini	IV	800	205	... ...	—	—	—
Australia	Knibbs	I	1,530	318	Official, Knibbs	I	258	54
Canada	Bankers' Association ...	II	2,285	300	Giffen	IV	300	40
Japan	Stamp	IV	2,400	44	Stamp	III	325	6
Argentine	Burge	III	2,400	340	... ...	—	—	—

* Grade I. Estimate is not likely to be inaccurate to a greater extent than 10 per cent.
" II. " " " " " 20 " "
" III. " " " " " 30 " "
" IV. " *may* be inaccurate " " " 40 " "

"country to consist in, whether in the annual produce of its "land and labour, as plain reason seems to dictate, or in the "quantity of the precious metals which circulate within it, as "vulgar prejudices suppose; in either view of the matter, "every prodigal appears to be a public enemy and every frugal "man a public benefactor."

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Discussion on Dr. Stamp's Paper.

Sir Felix Schuster said he had the greatest pleasure in moving a most cordial vote of thanks to the reader of so valuable and interesting a Paper, a Paper which he hoped would be widely circulated amongst the public, as it contained just the sort of information that was really wanted. It was only as an ordinary member of the public that he ventured to address that distinguished gathering, and he did so with great diffidence, not only because he was one of the youngest recruits to the Society, but also because he could not possibly claim to be a scientific economist. His occupations, especially during the last five years, had made it impossible for him to keep up with the literature which had been produced during that time and had made him forget to a great degree what he had read before. But that perhaps made a vote of thanks more than the usual formality. He said in all sincerity that he was deeply grateful to the reader of the Paper for the information contained in it, which presented in a very intelligible and simple form valuable results and the methods by which they had been arrived at. Perhaps he was one of the persons alluded to at the beginning of the Paper who, he would not say had despised statistics, because he had never done such a thing, but who had very often looked upon statistics such as were sometimes produced in the papers and elsewhere with profound suspicion. The reason was because one saw the object for which they were produced, and that the methods which were adopted were not scientific. They had listened to a Paper that evening for which he was sure it could be claimed the results which were shown were the best that could possibly be arrived at from the information available. The part which appealed to him most was the test of the relative prosperity and resources of the different nations, and also the test of our own wealth and prosperity with regard to the future. As to the methods adopted in presenting a statement of our own wealth and income he certainly agreed with what had been said, that the total amount of the national debt must be deducted from the aggregate statement of wealth. He ventured to think in the national debt they ought also to include the indebtedness of local authorities, because they were equally a mortgage on the income of the nation. For instance, in the ordinary statement of the national debts such items as Irish land stock or local-owned stock were not included at all, because they were only contingent liability, but still they formed a mortgage on the whole. It was not clear whether in the summary table these amounts had been deducted, but in his opinion they should be if they wished to get a correct result. A proper allowance should be made for State property, which was an item it was difficult to get at. He did not perhaps quite follow one sentence in which the reader alluded to it

where he said that if the national debt were deducted from State property they would get a minus quantity in many cases. He thought they would almost invariably get a minus quantity. As far as he knew, before the war, India was the only one of the great countries where there was practically no taxation for payment of interest on debt. He was sorry that Dr. Stamp could not include India in his statement. The difficulties were obvious and very great, but it would have been interesting. Perhaps one of the German States also, viz., Bavaria, before the war had great national property. But all that would disappear after the war, and they would have a minus quantity. Coming to the test of income tax returns and the test of income generally, he was afraid that their present methods led to confusion and also to loss of revenue. They had now adopted a double system instead of invariable taxation at the source, and he regretted to say during the last loan operation, the latter was abandoned, and in certain loans now on the market the deduction did not take place at the source. That must lead to confusion in the end, and he thought they would be driven gradually into the census method and to adopt that method alone. He personally thought that eventually taxation at the source would have to be abandoned altogether. A personal statement by everyone was, he thought, inevitable in the future. At present a good many people quite innocently did not pay what they ought because they thought everything was taken off at the source and forgot to send in their returns. He did not think there was very much intentional evasion. He spoke from a certain amount of experience, because for a number of years he had been one of the additional Income Tax Commissioners in the City of London. He spoke strongly for the straightforwardness and honesty of the returns. He really thought that if there were any error in the accounts the error was rather against the taxpayer and in favour of the State. There were a few flagrant cases where one saw evasion, but very few, and on the whole he thought they could trust the returns to be straightforward and honest as long as the taxpayer knew what he had to do and the lines were very clearly laid down for him. He thought the time would come before very long when they would have to have a census of property generally on simple lines clearly specified. They would then have an effective test and be able to arrive at a proper solution of what the wealth of the country really was. He did not think the Death Duties test was at all reliable. Dr. Stamp had pointed out some of the disadvantages of that method, and there were others one could add. This was not the place to speak of the ethics of taxation, but he considered the Death Duties one of the most insidious forms of levy on capital which, if it took place at all, ought to be used in the reduction of debt and not as revenue, and that reliance on Death Duties would prove a great pitfall for a future Chancellor of the Exchequer. Coming to the summary table he had tried to work out the proportions between the income that was shown and the capital. He had

hoped to arrive at some general conclusion as to their relationship. He thought one might come to some conclusion whether highly-developed countries showed similar or different results to countries in which there was not such a high grade of development; but he did not think he could find much help in these returns. The proportions came out very similarly. The United Kingdom 15½ per cent., the United States 17 per cent., Germany 13 per cent., France 12½ per cent., Italy and Austria 18 per cent., Canada 13 per cent., Australia 16 per cent., and Spain only 8 per cent. But, as Dr. Stamp had pointed out, the figures for Spain could not be a true test of the situation. It did not appear whether the national debts had been deducted. But it was the future one had to consider, and they all looked forward to the next table for the post-war period which Dr. Stamp was going to produce, and which would be highly interesting. With regard to the national debts of various countries it would be very important to state where the debt was held, whether it was an external debt or an internal debt, as that would have a very important bearing on the economic position of the country concerned. Inflated and depreciated currencies would have to be taken into account. He supposed they would all be translated not at the par of exchange but at the real exchange of the day, and they would get some very different results from those which were shown in the table. If they wanted to arrive at a true test of the national wealth, they would also need to have a statement of the comparative cost of living in the various countries, and the table with the Index Numbers of the cost of the necessaries of life would be a very useful thing to have in such a statement. If it were possible to obtain it, he would also like to know what he would call the effort to attain the results: how much time was spent and what were the working hours. If they had those they would then have a true measure of the wealth. He supposed it was impossible to classify brain power. What they had to get at, as Dr. Stamp had pointed out, was not the actual wealth in being, but the potential wealth—the development and future efforts that were possible in the various countries, and especially in their own, in order to meet, as they had to meet, the difficulties which were in front of them during the coming years. Dr. Stamp had given them most valuable help in considering all those grave matters, and he wished to express the warmest thanks of the meeting which he was sure were due to him.

Sir GEORGE PAISH said he had very great pleasure in seconding the resolution. They were all greatly indebted to Dr. Stamp for the paper, which at the present time was of special value. They were all wondering how they were coming out of the war and how it was to be paid for. The credit of the world had been extended as it probably had never been extended before, and they wanted to know exactly where they stood. The paper would certainly help them in that direction. It was quite obvious that debt was not wealth. At the same time, it was not destruction of wealth. The

internal debt of a nation was held within the nation, and the holder of the debt placed it amongst his assets, while the rest of the community had to place it among its debits, and the two squared. The foreign debt was, of course, a debit, and they had to allow for it. Unfortunately, at the present time they had incurred a very substantial debt abroad, and they must allow for that fact. On the other hand, they had loaned a good deal of money to their Allies and Colonies, and, if that were good, it would go against the money they owed. He thought it would be nearly, if not quite, sufficient to pay off their foreign debts. Unfortunately the whole of their loans to Allies were not good; and, therefore, they had to allow as a debit against their wealth the net sum that they owed abroad on war account after placing a reasonable value upon their losses. Of course the nation had immense foreign investments in the aggregate to place against the money borrowed abroad during the war. It was computed that before the war their assets abroad were about 4,000 millions. If they deducted from that sum the loss they had incurred from bad foreign investments during the war, he thought they would still find they had over 3,000 millions sterling abroad on balance after paying their debts abroad. So that they were in a very strong position. With regard to the debt which had been incurred, it was quite true that the nation as a whole could not regard that asset as a credit; on the contrary, it was a debit; but the people who had subscribed to the debt and held it as an investment, necessarily included it in their accounts as an asset. When they came to consider how much wealth there would be available in the event of a levy, they must not only include the assets of the nation, but the debt of the nation, which was owned by private persons. If they did that, they would find that Dr. Stamp's basis of something like 14,500 millions as the wealth to be levied upon would come to something like 20,000 millions, which was including only 5,500 millions of debt, instead of the 7,400 millions they had incurred, the balance having been provided in part by borrowing abroad and in part by calling in money which they had previously loaned abroad. But the sum, at any rate, on which they would have to levy would be something like 20,000 millions on that basis. The amount would, indeed, be still greater than that if they took into account present valuations. Dr. Stamp had rightly not tried to bring the calculation up to date. It was quite impossible for anyone to do so, as no one knew what the value of property would be. They did know that in so far as property was changing hands at the present time, the value had very greatly increased. And the cost of replacing the property of the nation—buildings, works, machinery, &c., would be infinitely greater than the value stated in Dr. Stamp's work. So that, when they came to think of a levy on anything like existing values, they had to consider that the wealth was not some 14,500 millions, as estimated by Dr. Stamp, but a very much larger sum, and they would also have to include their war

debt. As to Dr. Stamp's statement with regard to the wealth of Germany, he was inclined to think there was an exaggeration. As he rightly pointed out, the various estimators wished to make it look as large as possible. Before the war Germany engaged in a campaign of flag-waving, as it were, exaggerating everything that it did, and making it appear that Germany could do quite extraordinary things. That campaign of exaggeration must be taken into account in reckoning what the wealth and income of Germany were prior to the war. He himself was very doubtful if even Dr. Helfferich's figure was correct. He thought that if they could have got an impartial investigator, they would have found it was still smaller. Referring to Sir Felix Schuster's statement with regard to income in relation to capital, that was a matter of very great importance. It was, of course, of importance that the capital they created and invested should yield a profit, but it was not nearly so important as that it should yield an income. For example, roads were a source of outgo. If they merely had to capitalise the profits of the nation, they would have to leave the roads out of account. They were of very great value and were an expense; but as a source of income they were of greater value than almost any kind of wealth other than the land, because without them they could not move the produce from place to place. So it might be with regard to other things. What he thought a nation should do was to try and keep its capital account down to the lowest possible figure. One of the things they were up against in their competition with Germany was the fact that some of the German companies—as, for instance, the Allgemeine Elektricitäts Gesellschaft—had written down some of their most important works to a mark, so that they had to pay no interest whatever on capital. In a time of competition such companies could disregard their capital account altogether, which seemed to him the desirable thing to do. As they knew, the American railways did the same thing. Year after year they devoted very large sums to betterments, and the result was that the capitalisation of American railways was extremely low in proportion to their value. From the companies' point of view, that was an advantage that could not very well be exaggerated, because the world from time to time got into periods of depression, and if they had debentures or preference dividends to meet, and there were no profits, companies were apt to go into bankruptcy. If, on the other hand, they had written down their capital to almost nothing, they could weather through the most severe storms. So that, while they must attach a certain amount of importance to the question of profits in relation to capital, he attached still greater importance to the table which Dr. Stamp had given them, showing the relation of the income of the nations to the capital of the nations. In calculating the capital in those circumstances, they would have to take what he might term an asset value. They would take item by item and value it at what it would cost to reproduce, and then discover what

proportion their income bore to their capital account. That was the great thing. They as a nation had now to endeavour to increase their income in relation to their capital, and he was convinced they could do it. The amount of inefficiency they had had in the past in all directions was simply extraordinary. They were now up against a very difficult situation, and he thought they could make their capital go very much further than it had ever gone before. If, for example, they could double their traffic on the railways without any appreciable increase of capital, the real value of that capital would be immensely greater than it was at present. It seemed to him that all the data Dr. Stamp had given them would enable them to think out more clearly the extent, value and use of their capital, and so help to make the nation more efficient.

Mr. PETHICK LAWRENCE said he thought no one would refuse to Dr. Stamp the tribute of the extraordinary care and great value of the paper he had read. He had taken the whole of the world as his province, and they had as a result a monumental standard which, in after years, would be looked back upon with the very greatest interest. They could not help regretting that he had not been able to bring the figures up-to-date as they would then have been still more interesting, but those who had attempted to consider the figures of recent years realised the extreme difficulty of doing that, and in any case they already had so much in the Paper that they could hardly ask for more. He wished to utter one warning with regard to figures taken for any particular year in that there was a time lag which he thought should be borne in mind. When they were dealing with purely pre-war figures the time lag might be comparatively unimportant, but when they were dealing with rapidly changing figures the time lag was exceedingly important. All the figures were put down for 1914. He hoped Dr. Stamp would tell them afterwards whether he thought they really represented the income for the year 1914 or whether they represented the income worked out in 1914, but really corresponding to the actual income of perhaps somewhere between 1912 and 1913. The same remarks applied somewhat to the matter of capital, but he was not quite clear whether the figures given in the Death Duties were really the figures for the deaths at those periods or whether they were amounts received corresponding to probates in those periods. That would make some difference and would affect the result. He asked Dr. Stamp also whether he had considered the reverse side to evasion. They had heard a good deal of evasion of income tax, but he had been brought into contact a good deal lately with cases where people did not claim all the deductions they were entitled to. He had not looked into it sufficiently to see whether it would affect totals, but it might do so in some cases. With regard to the inventory method of coming to a total he was not sure that sufficient importance was attached to the danger of overlapping. As a serious instance of overlapping with regard to post-war wealth he quoted the case of

the banks. People would sometimes work out the total wealth of these on the basis of the value of the bank shares, and would say that the wealth of the banks was a little more or a little less than it was before the war. They would then take the whole of the war debt not owned abroad and would add that to the wealth and say that the wealth had increased by so much. Banks held a very considerable amount of war debt amongst their assets, and he thought there was a danger if they were not careful that they would count the same thing twice over. That danger was mentioned, he thought, by Dr. Stamp with regard to the inventory method, but it might be very much more important than many people realised. One or two people had spoken rather disparagingly of the multiplier method. He ventured to think that it was more valuable than they had said, and he did not believe that the difference between the two methods was as great as was sometimes supposed. He had had reason recently to work with that method, and had found for the purposes for which he required it that there were a great many additions to be made, and those additions brought it very much nearer to the figures Dr. Stamp had arrived at on his own method than many people supposed. There was in particular the question of what Dr. Stamp had called communal wealth, and what he (the speaker) had called institutional wealth, including such things as the wealth of churches and chapels (which had lands and other property), the wealth of clubs, friendly societies and trade unions, &c., which probably came in all to no less than 2,000 millions or something near that figure. It made a very great deal of difference whether these were or were not included in what was called private wealth. He thought Dr. Stamp would probably agree with him when he said that it seemed to him that all the methods of computing wealth were important provided the purpose for which the result was to be used compared with the means by which the results had been obtained. For the purpose of finding the effect of a new income tax the best figure of wealth was one based upon the Income Tax Returns ; but if they were to attempt a levy on capital then he thought the multiplier method was probably the best, because it was basing like upon like, namely, the computation of capital. Some people would say that they did not want the amount of wealth for any particular purpose but wanted the absolute amount of wealth. He would point out to those who took that view that it was very difficult indeed to say what they meant by absolute wealth. To be absolute they ought to include the wealth of roads, bridges, and even rivers, but this would be very difficult. Therefore, much as they would like to have it, he ventured to suggest that the idea of absolute wealth was one which it was impossible to realise, and that the source of obtaining results should, if possible, be the same as the purpose for which the figures were to be obtained. An estimate of the post-war wealth of the country was of the very greatest importance for the purposes of taxation in the future. Whether they attempted to obtain an annual revenue to meet the liabilities

of the country, or whether they attempted to adopt the proposal which he favoured very strongly, namely, the levy upon capital, he thought it was quite clear that the wealth in private hands had very largely increased during the war, provided they included the private holdings of war debt but did not include among private liabilities the obligation for payment of the debt which was at present a corporate liability. Ultimately, it was on the assets of individuals that the debt would have to fall, whether on capital or on income, but at present it was not divided up.

He would hesitate to place the increase of private wealth as high as Sir George Paish had done. There was an amount to wipe off for internal loss in the shape of deterioration in property which (apart from price changes) he would put certainly at not less than 1,000 millions. He also thought that the amount of the War Loan held by the banks should be taken into account. There was also the vexed question of the appreciation of capital. The fact was that although the price of commodities had increased to an enormous extent this was not reflected at any rate to the same extent in the increase of price of capital. Whether it would be so in years to come when all capital tended to come to a supply value, as well as a demand value, remained to be seen. It was, therefore, very difficult to judge. It seemed to him that some kinds of capital had increased and some diminished, and it was rather guesswork on which side the balance lay. Personally, as an advocate of a levy on capital, he would be glad if the figure proved as high as Sir George Paish had put it, but he did not think it could, and he preferred to take a more conservative estimate. He should not like to recommend the proposal on the ground that it was going to produce a larger sum than he honestly believed in

Mr. J. E. Allen said he supposed when discussion wandered from the subject of the Paper, it was really the most sincere compliment to the reader, as the speakers found that they could not pick holes in what the reader had said. That was his attitude, and he felt sure when Mr. Pethick Lawrence rose from his seat that they would have something in the way of controversy. Mr. Lawrence maintained that the amount of privately held wealth had largely increased as a result of or during the war. That seemed to him an extremely controversial statement, and was one with which he entirely disagreed. He was not certain what had happened to the aggregate amount of private wealth during the war, nor was he at all certain as to what was the meaning of the war debt. He thought it would be an excellent subject for the Society if someone would try and explain to them what was meant by the war debt, and what really happened, for instance, when the Chancellor of the Exchequer floated a big loan for, say, 1,000 millions. It seemed to him that after the loan was floated the country was not 1,000 millions poorer, nor, on the other hand, was it 1,000 millions richer ; putting on one side subscriptions by or sales of securities to foreigners the amount

of wealth was exactly the same before the emission of the loan as it was after its emission. He would like to have had the opinion of Professor Edgeworth on that point. His own idea was that when a loan of that magnitude was issued what really happened was that all the wealth owned by private persons or institutions in securities was watered to that extent—that if they had before the loan securities worth 10,000 millions, after the loan had been issued those securities were only worth something a little over 9,000 millions; that was to say, the effect of borrowing by the Government for non-productive purposes was to make a levy upon the owners of certain kinds of existing wealth. He could not say whether that was so or not, but he was inclined to that opinion.

Mr. J. SORLEY said that the present fluctuation in values was strongly brought out in the estimate of the total war damage in Northern France. The claim amounted to 12,000,000,000*l.*, or approximately the value calculated for the total pre-war wealth of France. The calculation showed the difficulty of valuing a country's wealth, and the great alteration in values since 1914.

The CHAIRMAN said, before putting the vote of thanks, he wished to say how very important he thought Dr. Stamp's contribution to the subject had been. The Society might congratulate itself on having had, within a single session, two addresses on topics connected with public finance—the President's, and the one they had heard that evening—which he thought no Chancellor of the Exchequer could afford to neglect. A survey of that kind was one of the utmost value at the present time, when so many wild estimates were flying about, and he thought they would agree that Dr. Stamp had enabled them to feel confidence in the pre-war estimates which had been put forward; and that they made a most valuable starting point for investigations as to estimates of the present wealth and income which were so essential for taxation and other purposes. He hoped that the Paper would have the effect of stimulating further investigation on the subject. Dr. Stamp's discussion of the methods of valuation would be of great interest and importance if any such further investigation took place, and that was the part of the Paper which interested him most. He thought that Dr. Stamp would be the last to say they had reached finality in these questions; the discussion had shown that there was still some confusion, for instance, as to the way in which national debt should be treated. Dr. Stamp had alluded to this in his Paper and also in the articles in the *Economic Journal* of last September. But he would be glad of a little more light on the question of how this debt really affected the aggregate of privately owned wealth, which was the crux of the matter when it came to considering proposals for a capital levy. It was a very important matter in the pre-war estimates, but it had now become vital, and if one looked at the various estimates which had been made during the last year by, for instance, Mr. Pethick Law-

rence, Mr. J. E. Allen, Mr. Sydney Arnold, and Dr. Stamp, he thought one found there was always some difference in the method in which the estimate had been made, which largely accounted for the very great divergences in the total figure reached. He only alluded to this in order to emphasize the point that he thought further expert enquiry into the matter was essential. It seemed to him that it would be quite useless to begin discussing the expediency or otherwise of a capital levy until they got some agreement both as to the principle upon which an estimate of privately owned wealth should be made, and as to the existing amount of the wealth which would be subject to such a levy. His (Sir Bernard's) own estimate from estate duty statistics had generally been assailed on account of the disappointingly low total brought out. This did not greatly disturb him, as he thought there was much greater inconvenience in the inflated and exaggerated estimates which were so prevalent; but he had been consoled by Dr. Stamp's comments upon this estimate, and by the fact that Dr. Stamp's estimate of pre-war wealth in private ownership in the *Economic Journal* article referred to, which, if he was not mistaken, was in the neighbourhood of 11,000 millions, was almost exactly the amount he himself had arrived by his multiplier calculation.

A vote of thanks was passed unanimously to the author.

Dr. STAMP, in reply, thanked them for their vote and said he would reply briefly on the chief points made in the discussion. Sir Felix Schuster had referred to the question of national and local loans and as to whether they had been deducted in arriving at the figures in the table. He (Dr. Stamp) had purposely not elaborated the methods of arriving at the British figures under discussion, because his views had been stated at length in "British Incomes and Property" and in the *Economic Journal*. If anyone turned to that volume they would find that many of the questions raised that night had been dealt with there. The national and local loans had been deducted from the value of the Municipal and State property. Having first been put in as individual wealth in the hands of the people they had then been treated as a mortgage on the communal property, and this he thought was the most satisfactory way of dealing with it. There was a plus balance of value in State property in pre-war days, but dealing with it now there would be a minus quantity. With regard to Mr. Allen's question as to whether there was any increase of wealth on the flotation of a loan, the answer was that there had been merely a redistribution of wealth. That meant that one class of wealth apparently went up by 5,000 millions or 10,000 millions, which was added under one head, but it had to be taken off at another place before they got their total valuation. When they came to a valuation for a capital levy it was otherwise. There the individuals who held the War Loan had to be taxed on that, the same as everybody else, and therefore we might get a larger

gross figure liable to a capital levy than the net capital valuation of the country as a whole. It was quite certain that at the present moment there would be a minus quantity for State property on this method. Sir Felix had regretted that he (Dr. Stamp) had not put in any material with regard to India. He had looked at it carefully, and had found the figures so very diverse and nearly all from polemical literature, which it was so difficult to assess, that he had left it out of the paper. He hoped that it would be found by the present Commission which was sitting on the subject of income tax that taxation at the source, which Sir Felix thought was near its death-bed, would have a new lease of life and would be found to be compatible with universal individual statements of income. He thought that would be the only satisfactory result for any Chancellor, and he was sure some way would be found of dealing with it. Sir Felix had also dealt with the efficiency of the income tax, the question of evasion, &c. There were a number of people present who could speak effectively on this, but he had dealt with it in "British Incomes and Property," and had shown what he regarded as the net figure to be added to income tax totals for evasion. Even in the inventory method it was, as far as possible, only the net State property which had been added. The external debt did not come in amongst the assets of individuals, but it did come off the assets of State property, and therefore it served to lessen the total valuation. Sir Felix had made an interesting suggestion that they ought to be able to add to those figures some estimate of the effort put forward to realize them: that was the human horse power per pound of income, so to speak. One might find an equal number of hours perhaps, but one would have to think whether they were "brain-hours" or "hand-hours," and be up against the extraordinarily controversial and difficult problem of how to compare the hours put in by a miner with those put in by a civil servant, a statesman, or an ordinary professional man. They would have to take some unit like 30 as representing the proper effort of a miner and compare it with, say, 10 for a Cabinet Minister! Sir George Paish had said that his estimate of capital invested abroad was rather different from his (Dr. Stamp's). It was not actually mentioned in the Paper and could not be ascertained from the mere inspection of capital items, because a large sum was included under "companies" for those in the City, for example, which had mines abroad. But when he had worked it out with care for the *Economic Journal* he came to a figure which was near enough to that obtained by Sir George. There had been a great deal of confusion between the national wealth he had been dealing with and the wealth which would appear upon returns for a capital levy. Although he had 14,500 millions as the national wealth, he had shown in the *Economic Journal* that the figure which would have come out before the war on the returns for a capital levy would have been in the neighbourhood of 11,000 millions. There was a vast difference between what came out on personal returns for a levy and what

came out on a total valuation. It was obvious that all the vast wealth held in the reserves of companies was only partially reflected in the value of the shares, and there were many other forms in which it would not come out to individuals. He had made an estimate of the present amount of wealth, or rather, an estimate before the war was over, of 16,000 millions as being the post-war sum returnable by individuals, so that it had gone up by 5 millions. The amount of the War Loan could not be taken at its full value because there were enormous collective holdings which were not reflected to the slightest extent in the individual shares. The only person who had criticised his post-war figure was a friend who had gone into it carefully, judging all the facts, and had said that he had put it too high rather than too low. He thought Mr. Allen had shown in his recent book that there was a very large drop in the value of many forms of capital. All the debentures and preference shares were diminished by the very fact that the market rate of interest had risen. They had a very large amount of capital which had to be put at a lower figure now than before the war. He thought that Sir George Paish should make more allowance for this factor. The question had been raised as to whether he had included the value of roads. He would read a passage from "British Incomes and Property" on the point. "It can be argued with great "force that the greater part of the value of roads is already "included in the value of adjacent property. In so far as "the property is directly served it is enhanced in worth by the "present value of the services rendered by roads which have been "made and paid for in the past. One need not belong to the school "of thought which expects a cheaper 'hair cut' to work out into an "increased ground rent before one admits that, so far as minor "roads are concerned, their value must be mainly in the rents paid "for the houses, &c., served. There is very probably a surplus or "national value over and above the individual values in main roads, "taken as a system, and an estimate is permissible on that account. "Of course, it is open to argument, that all individual values are "improved by common wealth such as parks, but it is improbable "that the connection is so direct and full as in the case of sewers, "for example. In the case of recent expenditure (for the sake of "argument assumed to be outright) where rate of interest on outlay "is a controlling feature, the tenant's rent must cover streets and "sewers as much as it does the brickwork of the houses itself. In "the case of expenditure long past, where actual outlay has ceased "to command a rate of interest, we may consider a streetless, "sewerless house with poor situation, as upon the economic margin, "for which no site rent is payable, and contrast it with a similar "structure fully equipped, commanding a superior rent and a "distinct site rent. It is difficult to escape the conclusion that a "large part of public expenditure serving specific properties must "be valued in the valuation of those properties." So it would be seen that a valuation had been included for a surplus value in the main

roads system apart from the ordinary town roads. In the *Economic Journal*, in reckoning the national capital at the end of the war, he was not reckoning what the real worth of the country was in terms of any other period. He was asking what was the face value of the wealth which would appear on individual statements of total wealth. When they came to ask what the real wealth of the country was, he was completely with Mr. Allen that it had not been increased, though as a statement in pounds, shillings, and pence, it might have done. What actually happened when a loan was floated, it seemed to him, if he might digress, was that if the loan was really provided to the Government out of the savings of the nation, they then got what he might call a charge for interest on every taxpayer. If it had been allocated as an interest payment to someone else, it would have reduced their income from 400 millions to 350 millions or 50 millions per annum. But under taxation instead of interest they would still call their income 400 millions, but the net effect was that it reduced their income by 50 millions and increased somebody else's income by 50 millions. In so far as that was not provided by a genuine saving but was an inflation of currency, it was obtained by the Government depreciating everybody's purchasing power. The inventory method tended to be lower in its results than a valuation as a going-concern—the capitalization of profits—if a country were prosperous because there was a large element of goodwill constantly, on the rise. On the other hand, the capital valuation, quite in the American form, was not merely a valuation of so many years' purchase of an existing profit, but it had also got a future site value in it. The inventory methods therefore tended to have larger values than a going-concern if the site values were increasing. The two together perhaps might tend to cancel out. With reference to what Mr. Pethick Lawrence had said as to the time "lag," in "British Incomes and Property" he had shown the point of time to which an income tax assessment might be said to relate. They would notice in his table he had raised the figure from 14,300 to 14,500 millions for that very reason, that he was trying to get the figure to what it stood in July, 1914, whereas his original estimate was some time in the financial year 1913–14; a date precisely fixed would rotate about January as a fixed point. He had added half a year's savings at the rate of 400 millions per annum. On the question of overlapping there was, of course, a tendency which could be seen in the process of investigating the inventory methods of other countries. The very first thing to get was the investigators' method of dealing with this. Supposing they took an investigator who was about to make up an inventory for this country, and found him taking the total capital of the companies quoted on the Stock Exchange, they knew at once they need not go any further with that man because they would see that he was not qualified for his task. They all knew that there was an immense duplication of capital, one company holding the capital of another, and so on. It was merely duplication and did not get down to real capital at all.

Some enquirers had put an enormous amount of work into this question of dealing with share values as contrasted with the real value which had been put into the business. As to statements with regard to damages and so on, it was one thing to talk about the pre-war wealth of the country and quite another to discuss the cost of making good anything at present prices. The latter might be easily three or four times as much, and if there were elements of exaggeration, to give a margin for beating down, it would not invalidate the work of the French investigators in arriving at 12,000,000,000*l.* as the pre-war capital of France. In conclusion, he thanked them for the kind attention they had given to his Paper, and hoped that he had dealt with most of the points which had been raised.

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